```
ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS
L2
ΑN
     2001:246563 CAPLUS
DN
     134:266198
     Preparation of N-arylsulfonyl amino acid derivatives as c-Jun N-terminal
ΤI
     kinase inhibitors
IN
     Arkinstall, Stephen
     Applied Research Systems ARS Holding N.V., Neth. Antilles
PA
SO
     Eur. Pat. Appl., 29 pp.
     CODEN: EPXXDW
DT
     Patent
     English
LA
FAN.CNT 1
                                          APPLICATION NO. DATE
     PATENT NO.
                    KIND DATE
                    ---- -----
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                     A1 20010404
                                          EP 1999-810871 19990928
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                     A1 20010405
                                          WO 2000-IB1382 · 20000928 <--
     WO 2001023379
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             CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
            HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
            LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
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            YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
             CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                         EP 2000-960922 20000928
     EP 1218375
                           20020703
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                            20030318
                                          JP 2001-526531
     JP 2003510320
                    T2
PRAI EP 1999-810871
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OS
    MARPAT 134:266198
             THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
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             ALL CITATIONS AVAILABLE IN THE RE FORMAT
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ENTER DISPLAY CODE (TI) OR ?:rn
           ANALYZE L2 1 RN :
                                   17 TERMS
=> fil req
COST IN U.S. DOLLARS
                                                 SINCE FILE
                                                                 TOTAL
                                                      ENTRY
                                                               SESSION
FULL ESTIMATED COST
                                                      14.57
                                                                 14.78
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FILE 'REGISTRY' ENTERED AT 17:51:36 ON 26 JUN 2003 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 25 JUN 2003 HIGHEST RN 537653-06-8 DICTIONARY FILE UPDATES: 25 JUN 2003 HIGHEST RN 537653-06-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when

conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELF PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s 13

L4 17 L3

=> d 1-17

L4 ANSWER 1 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN 332082-90-3 REGISTRY

CN 2-Thiophenesulfonyl chloride, 5-[(di-2-propenylamino)methyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 5-((Diallylamino)methyl)thiophene-2-sulfonyl chloride

FS 3D CONCORD

MF C11 H14 Cl N O2 S2

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

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CH_2-CH \longrightarrow CH_2
\end{array}$$

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1957 TO DATE)

6 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L4 ANSWER 2 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN 332082-89-0 REGISTRY

CN 2-Thiophenemethanamine, N, N-di-2-propenyl- (9CI) (CA INDEX NAME) OTHER NAMES:

CN Diallyl [[thiophen-2-yl]methyl]amine

FS 3D CONCORD

MF C11 H15 N S

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 6 REFERENCES IN FILE CA (1957 TO DATE)
- 6 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L4 ANSWER 3 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN 332082-88-9 REGISTRY

CN Glycine, N-[[5-[[(4-chlorobenzoyl)amino]methyl]-2-thienyl]sulfonyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C14 H13 C1 N2 O5 S2

SR CA

LC STN Files: CA, CAPLUS

$$HO_2C-CH_2-NH-S$$
 CH_2-NH-C
 $C1$

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L4 ANSWER 4 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN 332082-87-8 REGISTRY

FS 3D CONCORD

MF C18 H21 Cl N2 O5 S2

SR CA

LC STN Files: CA, CAPLUS

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L4 ANSWER 5 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN 332082-86-7 REGISTRY

CN Benzamide, 4-chloro-N-(2-thienylmethyl)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 4-Chloro-N-thiophen-2-ylmethylbenzamide

FS 3D CONCORD

MF C12 H10 Cl N O S

SR CA

LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1957 TO DATE)

6 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L4 ANSWER 6 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN 332082-85-6 REGISTRY

CN Benzamide, 4-chloro-N-[[5-[[[2-oxo-2-[[2-[[5-(trifluoromethyl)-2-pyridinyl]amino]ethyl]amino]ethyl]amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C22 H21 Cl F3 N5 O4 S2

SR CA

LC STN Files: CA, CAPLUS

PAGE 1-A

PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L4 ANSWER 7 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN 332082-84-5 REGISTRY

CN Benzamide, 4-chloro-N-[[5-[[[2-oxo-2-[[2-[[3-(trifluoromethyl)-2-pyridinyl]amino]ethyl]amino]ethyl]amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C22 H21 Cl F3 N5 O4 S2

SR CA

LC STN Files: CA, CAPLUS

PAGE 1-A

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 1 REFERENCES IN FILE CA (1957 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L4 ANSWER 8 OF 17 REGISTRY COPYRIGHT 2003 ACS
- RN 332082-83-4 REGISTRY
- CN Benzamide, 4-chloro-N-[[5-[[[2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-2-oxoethyl]amino]sulfonyl]-2-thienyl]methyl]-
 - (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C21 H21 Cl N6 O6 S2
- SR CA
- LC STN Files: CA, CAPLUS

PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 1 REFERENCES IN FILE CA (1957 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L4 ANSWER 9 OF 17 REGISTRY COPYRIGHT 2003 ACS
- RN 332082-82-3 REGISTRY
- CN Benzamide, 4-chloro-N-[[5-[[[2-[[2-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]amino]ethyl]amino]-2-oxoethyl]amino]sulfonyl]-2-thienyl]methyl]-(9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C22 H20 Cl2 F3 N5 O4 S2
- SR CA
- LC STN Files: CA, CAPLUS

PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L4 ANSWER 10 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN 291756-39-3 REGISTRY

CN Kinase (phosphorylating), gene c-jun protein N-terminal, 3 (9CI) (CA INDEX NAME)

OTHER NAMES:

CN c-Jun N-terminal kinase 3

CN Gene c-jun protein N-terminal kinase 3

CN JNK3

CN JNK3 kinase

CN JNK3 protein kinase

CN Jun N-terminal kinase 3

CN Mitogen-activated protein kinase 10

CN Protein kinase JNK3

CN Protein kinase MAPK10

MF Unspecified

CI MAN

SR CA

LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

83 REFERENCES IN FILE CA (1957 TO DATE)

84 REFERENCES IN FILE CAPLUS (1957 TO DATE)

- L4 ANSWER 11 OF 17 REGISTRY COPYRIGHT 2003 ACS
- RN 289899-93-0 REGISTRY

CN Kinase (phosphorylating), gene c-jun protein N-terminal, 2 (9CI) (CA INDEX NAME)

OTHER NAMES:

CN c-Jun N-terminal kinase 2

CN Gene c-jun protein N-terminal kinase 2

CN JNK-55 protein kinase

CN JNK2

CN JNK2 kinase

CN JNK2 protein kinase

CN Jun N-terminal kinase 2

CN p54 c-Jun N-terminal kinase

CN P54 c-Jun NH2-terminal kinase

CN p54JNK kinase

CN p55JNK kinase

CN Protein kinase JNK2

CN Protein kinase p54JNK

MF Unspecified

CI MAN

SR CA

LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

237 REFERENCES IN FILE CA (1957 TO DATE)

4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

237 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L4 ANSWER 12 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN 219478-19-0 REGISTRY

CN 1,2-Ethanediamine, N-[3-chloro-5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C8 H9 Cl F3 N3

CI COM

SR CA

LC STN Files: CA, CAPLUS, CHEMCATS, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1957 TO DATE)

4 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L4 ANSWER 13 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN 166964-34-7 REGISTRY

CN 2-Thiophenesulfonyl chloride, 5-[[(4-chlorobenzoyl)amino]methyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 5-(((4-Chlorobenzoyl)amino)methyl)-2-thiophenesulfonyl chloride

CN 5-[(4-Chlorobenzamido)methyl]thiophene-2-sulfonyl chloride

CN 5-[N-(4-Chlorobenzoyl)aminomethyl]thiophene-2-sulfonyl chloride

CN 5-[[[1-(4-Chlorophenyl)methanoyl]amino]methyl]thiophene-2-sulfonyl chloride

FS 3D CONCORD

MF C12 H9 Cl2 N O3 S2

SR CA

LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, CSCHEM, TOXCENTER, USPAT2, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1957 TO DATE)
15 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L4 ANSWER 14 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN 27757-85-3 REGISTRY

CN 2-Thiophenemethanamine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Thenylamine (6CI, 7CI, 8CI)

OTHER NAMES:

CN (Thiophen-2-ylmethyl) amine

CN 2-Aminomethylthiophene

CN 2-Thienylmethylamine

CN 2-Thiophenemethylamine

FS 3D CONCORD

MF C5 H7 N S

CI COM

LC STN Files: ANABSTR, BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, GMELIN*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

360 REFERENCES IN FILE CA (1957 TO DATE)

8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

362 REFERENCES IN FILE CAPLUS (1957 TO DATE)

4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 15 OF 17 REGISTRY COPYRIGHT 2003 ACS

RN **27532-96-3** REGISTRY

CN Glycine, 1,1-dimethylethyl ester, hydrochloride (9CI) (CA INDEX NAME) OTHER CA INDEX NAMES:

CN Glycine, tert-butyl ester, hydrochloride (7CI, 8CI) OTHER NAMES:

CN · Glycine tert-butyl ester hydrochloride

CN tert-Butylglycinate hydrochloride

MF C6 H13 N O2 . Cl H

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CSCHEM, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)

CRN (6456-74-2)

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● HCl

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

283 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
284 REFERENCES IN FILE CAPLUS (1957 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

ANSWER 16 OF 17 REGISTRY COPYRIGHT 2003 ACS T.4 RN 122-01-0 REGISTRY Benzoyl chloride, 4-chloro- (9CI) (CA INDEX NAME) OTHER CA INDEX NAMES: Benzoyl chloride, p-chloro- (6CI, 7CI, 8CI) OTHER NAMES: 4-Chlorobenzoic acid chloride CNCN4-Chlorobenzoyl chloride CNp-Chlorobenzoyl chloride CNpara-Chlorobenzoyl chloride FS 3D CONCORD MF C7 H4 Cl2 O BEILSTEIN*, BIOBUSINESS, CA, CAOLD, CAPLUS, CASREACT, LC STN Files: CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DETHERM*, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, NIOSHTIC, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL (*File contains numerically searchable property data)

EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

Other Sources:

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2724 REFERENCES IN FILE CA (1957 TO DATE)
22 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2728 REFERENCES IN FILE CAPLUS (1957 TO DATE)
30 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 17 OF 17 REGISTRY COPYRIGHT 2003 ACS RN 106-95-6 REGISTRY
CN 1-Propene, 3-bromo- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Propene, 3-bromo- (8CI)
OTHER NAMES:
CN 1-Bromo-2-propene
CN 2-Propenyl bromide

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CN 3-Bromo-1-propene
CN 3-Bromopropene
CN 3-Bromopropylene
CN 37: PN: WO03037338 PAGE: 58 claimed sequence
CN Allyl bromide
FS 3D CONCORD
MF C3 H5 Br
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CI COM

LC STN Files: ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DETHERM*, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USPAT2, USPATFULL

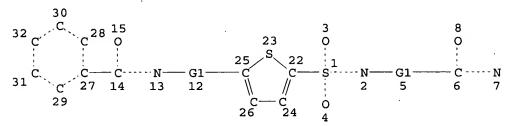
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Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

Br-CH2-CH-CH2

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11502 REFERENCES IN FILE CA (1957 TO DATE)
177 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
11542 REFERENCES IN FILE CAPLUS (1957 TO DATE)
7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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GRAPH ATTRIBUTES:
RSPEC 22 27
NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE

=> s 15 ful FULL SEARCH INITIATED 17:58:22 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 71 TO ITERATE

100.0% PROCESSED 71 ITERATIONS 15 ANSWERS

SEARCH TIME: 00.00.01

L7 15 SEA SSS FUL L5

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L8 11 L7 NOT L4

=> fil caplus

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION

FULL ESTIMATED COST 182.79 197.57

FILE 'CAPLUS' ENTERED AT 17:58:48 ON 26 JUN 2003 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 26 Jun 2003 VOL 138 ISS 26 FILE LAST UPDATED: 25 Jun 2003 (20030625/ED) This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> s 18
L9
              8 L8
=> d bib abs hitstr 1-8
L9
     ANSWER 1 OF 8 CAPLUS COPYRIGHT 2003 ACS
     2002:521684 CAPLUS
AN
DN
     137:88483
ΤI
     Hydrophobic polyamine analogs and methods for their use
IN
     Burns, Mark Robert; Graminski, Gerard F.; Banduir, Nand
PA
     Oridigm Corporation, USA
SO
     PCT Int. Appl., 91 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LА
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     PATENT NO.
                       KIND
                             DATE
                                              APPLICATION NO.
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              TJ, TM
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PRAI US 2001-260415P
                              20010108
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     MARPAT 137:88483
AB
     The invention provides polyamine analogs and derivs. contg. a hydrophobic
     region and a polyamine region, as well as methods and compns. for their
     use. The compds. of the invention can be used e.g. to treat cancer
     osteoporosis, asthma, etc.
     330162-58-8
IT
     RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
         (hydrophobic polyamine analogs and use)
RN
     330162-58-8 CAPLUS
     Benzamide, N-[[5-[[[(5S)-5-amino-6-[[3-[[4-[(3-
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     aminopropyl) amino] butyl] amino] propyl] amino] -6-oxohexyl] amino] sulfonyl] -2-
     thienyl]methyl]-4-chloro- (9CI) (CA INDEX NAME)
Absolute stereochemistry.
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EP 2001-946044 20010531

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CAPLUS
                              COPYRIGHT 2003 ACS
     ANSWER 2 OF 8
L9
ΑN
     2001:886056 CAPLUS
DŃ
     136:15226
TI
     Novel polyamine transport-inhibiting polyamine analogues as therapeutic
     and diagnostic agents
IN
     Vermeulin, Nicolaas M. J.; O'day, Christine L.; Webb, Heather K.; Burns,
     Mark R.; Bergstrom, Donald E.
PA
     Oridigm Corporation, USA
     PCT Int. Appl., 102 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LΑ
     English
FAN.CNT 1
                              DATE
     PATENT NO.
                        KIND
                                               APPLICATION NO.
     WO 2001092218
                         A2
                              20011206
                                               WO 2001-US17795
                                                                 20010531
     WO 2001092218
                         A3
                              20030327
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              CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
              LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
              RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,
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         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
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AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

Ι

A2

20030611

EP 1317424

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N$$

AB Novel "bispolyamine" inhibitor compds. of polyamine transport are disclosed. These compds. are useful pharmaceutical agents for treating diseases where it is desired to inhibit polyamine transport or other polyamine binding proteins, for example cancer and post-angioplasty

injury. These compds. display desirable activities both for diagnostic and research assays and therapy. Most of the spermine dimers that have been tested provided very good Ki for transport inhibition with values under 75 nM. ORI 1236 (I) was the most potent inhibitor with a Ki of 22 nM. The results were generally mirrored in the growth inhibition assay. All of the compds. were synergistic with difluoromethylornithine, a polyamine synthesis inhibitor, with IC50 values of 10 .mu.M or less.

IT 220221-41-0 220221-56-7 287968-56-3

330162-48-6 330162-52-2

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(novel polyamine transport-inhibiting polyamine analogs as therapeutic and diagnostic agents)

RN 220221-41-0 CAPLUS

CN Benzamide, N-[[5-[[6-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-6-oxohexyl]amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

$$_{12}^{O}$$
 $_{12}^{O}$ $_{13}^{O}$ $_{14}^{O}$ $_{14$

PAGE 1-B

RN 220221-56-7 CAPLUS

CN Benzamide, 4-chloro-N-[[5-[[(6-oxo-7,11,16,20-tetraazadocos-1-yl)amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

EtNH-
$$(CH_2)_3$$
-NH- $(CH_2)_4$ -NH- $(CH_2)_3$ -NH-C- $(CH_2)_5$ -NH-S

PAGE 1-B

RN 287968-56-3 CAPLUS

CN Benzamide, N-[[5-[[6-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-6-oxohexyl]amino]sulfonyl]-2-thienyl]methyl]-4-chloro- (9CI) (CA INDEX NAME)

$$_{\text{H}_{2}\text{N}-\text{ (CH}_{2})_{3}-\text{NH}-\text{ (CH}_{2})_{4}-\text{NH}-\text{ (CH}_{2})_{3}-\text{NH}-\text{C- (CH}_{2})_{5}-\text{NH}-\overset{\text{O}}{\underset{||}{\text{II}}}$$

PAGE 1-B

RN 330162-48-6 CAPLUS

CN Benzamide, N-[[5-[[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-3-oxopropyl]amino]sulfonyl]-2-thienyl]methyl]-4-chloro- (9CI) (CA INDEX NAME)

PAGE 1-A

$$_{\text{H}_{2}\text{N}-\text{ (CH}_{2})_{3}-\text{NH}-\text{ (CH}_{2})_{4}-\text{NH}-\text{ (CH}_{2})_{3}-\text{NH}-\text{C-CH}_{2}-\text{CH}_{2}-\text{NH}-\text{S}}$$

PAGE 1-B

$$-\operatorname{CH}_2-\operatorname{NH-C} \overset{\circ}{\longrightarrow} \overset{\operatorname{Cl}}{\longrightarrow}$$

RN 330162-52-2 CAPLUS

CN Benzamide, N-[[5-[[[(1S)-1-[[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]carbonyl]-2-methylpropyl]amino]sulfonyl]-2-thienyl]methyl]-4-chloro-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

$$H_{2N}$$
 (CH₂) $\stackrel{H}{\stackrel{N}{\stackrel{}}}$ (CH₂) $\stackrel{H}{\stackrel{}}$ (CH₂) $\stackrel{H}{\stackrel{}}$ (CH₂) $\stackrel{G}{\stackrel{}}$ (CH₂) \stackrel

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ANSWER 3 OF 8 CAPLUS COPYRIGHT 2003 ACS
 L9
 ΑN
       2001:730681
                      CAPLUS
 DN
       135:272682
 ΤI
       Polyamine analogues as cytotoxic agents
 IN
       Burns, Mark R.
       Oridigm Corporation, USA
 PA
 SO
       PCT Int. Appl., 57 pp.
       CODEN: PIXXD2
 DT
       Patent
 LΑ
       English
 FAN.CNT 1
       PATENT NO.
                            KIND
                                   DATE
                                                     APPLICATION NO.
                                                                         DATE
       WO 2001072685
 ΡI
                           . A2
                                                     WO 2001-US40360
                                                                         20010323
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                             A3
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            R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
                 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
       US 2003045755
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                                   20030306
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                                                                          20020923
 PRAI US 2000-191839P
                             Р
                                   20000324
       WO 2001-US40360
                             W
                                   20010323
       MARPAT 135:272682
. OS
 GI
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AB Novel cytotoxic polyamine analogs are disclosed. These analogs are useful pharmaceutical agents for treating diseases where it is desired to inhibit cell growth and/or proliferation, for example cancer and post-angioplasty injury. Thus, I (ORI 1313) is prepd. and inhibited A375 melanoma growth

36% in mice.

IT 330163-38-7P 330163-49-0P 330163-51-4P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of polyamine analogs as cytotoxic agents)

RN 330163-38-7 CAPLUS

CN Benzamide, N,N'-[(6,21-dioxo-7,11,16,20-tetraaza-1,25-pentacosanediyl)bis(iminosulfonyl-5,2-thiophenediylmethylene)]bis[4-chloro-(9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

$$- (CH2)4 - NH - (CH2)3 - NH - C - (CH2)4 - NH - S - CH2 - NH - C - (CH2)4 - NH - (CH2)4 - NH - C - (CH2)4$$

PAGE 1-C

RN 330163-49-0 CAPLUS

CN 2,6,11,15-Tetraazaheneicosanoic acid, 21-[[[5-[[(4-chlorobenzoyl)amino]methyl]-2-thienyl]sulfonyl]amino]-16-oxo-, phenylmethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

RN 330163-51-4 CAPLUS

CN 2,6,11,15-Tetraazaheneicosanoic acid, 21-[[[5-[[(4-

chlorobenzoyl)amino]methyl]-2-thienyl]sulfonyl]amino]-16-oxo-, methyl ester (9CI) (CA INDEX NAME)

PAGE 1-B

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ANSWER 4 OF 8 CAPLUS COPYRIGHT 2003 ACS
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2001:283950 CAPLUS AN

DN 134:295844

ΤI Preparation of amino lactam sulfonamides as inhibitors of A.beta.-protein production

Thompson, Lorin Andrew; Han, Amy Qi IN

PA Du Pont Pharmaceuticals Company, USA

SO PCT Int. Appl., 194 pp.

CODEN: PIXXD2

DT Patent

LΑ English

FAN.CNT 2

GΙ

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PATENT NO.
                     KIND
                           DATE
                                          APPLICATION NO.
                                                           DATE
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ΡI
    WO 2001027108
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                      A1
                                          WO 2000-US27666
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            TJ, TM
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            PT, SE
    EP 1218377
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                                          EP 2000-970627
                                                           20001007
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, CY
                           20030107
                                          US 2000-684718
                                                           20001007
    US 6503901
                      B1
PRAI US 1999-158565P
                      Р
                           19991008
    WO 2000-US27666
                      W
                           20001007
    MARPAT 134:295844
os
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$$Q \xrightarrow{\text{S2}} N \xrightarrow{\text{R5 R5? R6}} N \xrightarrow{\text{N}} N \xrightarrow{\text{W}} X \xrightarrow{\text{Y}} Z$$

AB The title compds. [I; Q = alkyl, cycloalkyl, etc.; R2 = H, alkyl, alkoxyalkyl, etc.; R5 = H, alkyl, alkoxy, etc.; R5a = H, alkyl; R6 = H, alkyl, aryl, etc.; ring B = 6-8 membered (un)satd. (un)substituted lactam which optionally contains heteroatom; W = (CR8R8a)p; p = 0-4; R8, R8a = H, F, alkyl, etc.; X = a bond, aryl, cycloalkyl, etc.; Y = a bond, alkylene, etc.; Z = H, alkyl, alkenyl, etc.] which inhibit the processing of amyloid precursor protein and, more specifically, inhibit the prodn. of A.beta.-peptide, thereby acting to prevent the formation of neurol. deposits of amyloid protein, were prepd. E.g., a 3-step synthesis of II was given. More particularly, the present invention relates to the treatment of neurol. disorders related to .beta.-amyloid prodn. such as Alzheimer's disease and Down's Syndrome. Also, method for inhibiting .gamma.-secretase activity was claimed.

IT 334870-26-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of amino lactam sulfonamides as inhibitors of A.beta.-protein prodn.)

RN 334870-26-7 CAPLUS

CN Benzamide, N-[[5-[[(1S)-1-[[(2,3-dihydro-1-methyl-2-oxo-5-phenyl-1H-1,4-benzodiazepin-3-yl)amino]carbonyl]-3-methylbutyl]amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS AN 2001:283935 CAPLUS

DN 134:311233

Amino lactam sulfonamides as inhibitors of amyloid-.beta. protein ΤI production

IN Thompson, Lorin Andrew

Du Pont Pharmaceuticals Company, USA PA

SO PCT Int. Appl., 161 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

PATENT NO. KIND DATE APPLICATION NO. DATE ΡI WO 2001027091 20010419 WO 2000-US27665 20001007 Α1 W: AU, BR, CA, CN, CZ, EE, HU, IL, IN, JP, KR, LT, LV, MX, NO, NZ, PL, RO, SG, SI, SK, TR, UA, VN, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE EP 1222176 20020717 EP 2000-970626 20001007 Α1 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY US 6503901 B1 20030107 US 2000-684718 20001007 PRAI US 1999-158565P P 19991008 WO 2000-US27665 W 20001007 · MARPAT 134:311233 os GΙ

AB This invention relates to prepn. of novel lactams, particularly benzo[e][1,4]diazepines (I) [wherein Q = (un) substituted (cyclo) alkyl, alkenyl, alkynyl, carbocyclyl, aryl, or heterocyclyl; R2 = H or (un)substituted (alkoxy)alkyl, carbocyclyl(methyl), aryl(methyl), arylethyl, or heterocyclyl; R5 and R5a combine to form a 3-7 membered (un) substituted cycloalkyl or benzo-fused ring; R6 = H or (un) substituted alkyl, carbocyclyl, or aryl; ring B = 6-8 membered (un)substituted lactam, optionally contg. N, NH, NR10, O, S, SO, or SO2; R10 = H, acyl, carboxy (ester), carbamoyl, sulfamoyl, (un) substituted alkyl, aryl, carbocyclyl, heterocyclyl, etc.; W = (CR8R8a)p; p = 0-4; R8 and R8a = independently H, F, (cyclo)alkyl, alkenyl, or alkynyl; X = a bond or (un)substituted aryl, cycloalkyl, carbocycyl, or heterocyclyl; Y = a bond or (CR9R9a)tV(CR9R9a)u; R9 and R9a = independently H, F, or (cycloalkyl); t and u = independently 0-3; V = a bond, CO, O, S, SO, SO2, CO2, OCO or

(un) substituted NH, CONH, NHCO, NHCO2, SO2NH, NHSO, or SONH; Z = H or (un) substituted alkyl, alkenyl, alkynyl, aryl, carbocyclyl, or heterocyclyl] and their pharmaceutical compns. These novel compds. inhibit the processing of amyloid precursor protein and, more specifically, inhibit the prodn. of amyloid-.beta. (A.beta.) peptide, thereby acting to prevent the formation of neurol. deposits of amyloid protein (no data). More particularly, the present invention relates to the treatment of neurol. disorders related to .beta.-amyloid prodn., such as Alzheimer's disease and Down's Syndrome (no data). For example, 3-amino-1-methyl-5-phenyl-1,3-dihydrobenzo[e][1,4]diazepin-2-one was coupled with N-Boc-L-leucine, deprotected using TFA, and coupled with 3,5-dimethylisoxazole-4-sulfonyl chloride to give II.

IT 334870-26-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of amino lactam sulfonamides as inhibitors of a.beta. protein prodn.)

RN 334870-26-7 CAPLUS

CN Benzamide, N-[[5-[[[(1S)-1-[[(2,3-dihydro-1-methyl-2-oxo-5-phenyl-1H-1,4-benzodiazepin-3-yl)amino]carbonyl]-3-methylbutyl]amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L9 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2003 ACS
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AN 2001:207925 CAPLUS

DN 134:237682

TI Novel polyamine analogues as therapeutic and diagnostic agents

IN Vermeulin, Nicholaas M. J.; O'Day, Christine L.; Webb, Heather K.; Burns,
Mark R.; Bergstrom, Donald E.

PA Oridigm Corporation, USA

SO Eur. Pat. Appl., 140 pp. CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PATENT NO. APPLICATION NO. KIND DATE DATE ΡI EP 1085011 A1 20010321 EP 2000-308049 20000915 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO JP 2001172244 20010626 JP 2000-282752 20000918 A2

PRAI US 1999-396523 A 19990915

AB Novel inhibitors of polyamine transport having inhibition consts. two orders of magnitude lower than those of known compds. are disclosed. These polyamine analogs are useful pharmaceutical agents for treating disease where it is desired to inhibit polyamine transport or other polyamine binding proteins, for example cancer and post-angioplasty

injury. Novel chem. synthetic methods to obtain polyamine analogs are disclosed, including the prodn. of a combinatorial polyamine library. These approaches yield analogs with desirable activities both for diagnostic and research assays and therapy. The assays of the invention are useful for high throughput screening of targets in the discovery of drugs that interact with the polyamine system.

IT 220221-41-0P 287968-56-3P 330162-38-4P 330162-48-6P 330162-52-2P 330162-58-8P 330163-38-7P 330163-49-0P 330163-51-4P

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of polyamines as therapeutic and diagnostic agents)

RN 220221-41-0 CAPLUS

CN Benzamide, N-[[5-[[6-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-6-oxohexyl]amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

$$_{12}^{O}$$
 $_{12}^{O}$ $_{13}^{O}$ $_{14}^{O}$ $_{14$

PAGE 1-B

RN 287968-56-3 CAPLUS

CN Benzamide, N-[[5-[[6-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-6-oxohexyl]amino]sulfonyl]-2-thienyl]methyl]-4-chloro- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

RN 330162-38-4 CAPLUS

CN Benzamide, N-[[5-[[(21-amino-6-oxo-7,11,16,20-tetraazaheneicos-1-yl)amino]sulfonyl]-2-thienyl]methyl]-4-chloro-(9CI) (CA INDEX NAME)

PAGE 1-B

RN 330162-48-6 CAPLUS

CN Benzamide, N-[[5-[[[3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-3-oxopropyl]amino]sulfonyl]-2-thienyl]methyl]-4-chloro- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

RN 330162-52-2 CAPLUS

CN Benzamide, N-[[5-[[[(1S)-1-[[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]carbonyl]-2-methylpropyl]amino]sulfonyl]-2-thienyl]methyl]-4-chloro-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

$$H_{2}N$$
 $(CH_{2})_{3}$
 H
 $(CH_{2})_{4}$
 H
 $(CH_{2})_{3}$
 $(CH_{2})_{3}$
 $(CH_{2})_{4}$
 $(CH_{2})_{3}$
 $(CH_{2})_{5}$
 $(C$

RN 330162-58-8 CAPLUS

CN Benzamide, N-[[5-[[[(5S)-5-amino-6-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-6-oxohexyl]amino]sulfonyl]-2-thienyl]methyl]-4-chloro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

RN 330163-38-7 CAPLUS

CN Benzamide, N,N'-[(6,21-dioxo-7,11,16,20-tetraaza-1,25-pentacosanediyl)bis(iminosulfonyl-5,2-thiophenediylmethylene)]bis[4-chloro-(9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

PAGE 1-C

RN 330163-49-0 CAPLUS

CN 2,6,11,15-Tetraazaheneicosanoic acid, 21-[[[5-[[(4-chlorobenzoyl)amino]methyl]-2-thienyl]sulfonyl]amino]-16-oxo-, phenylmethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

$$-NH-S S CH_2-NH-C$$

RN 330163-51-4 CAPLUS

CN 2,6,11,15-Tetraazaheneicosanoic acid, 21-[[[5-[[(4-chlorobenzoyl)amino]methyl]-2-thienyl]sulfonyl]amino]-16-oxo-, methyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

$$\begin{array}{c|c} S & O & CH_2-NH-C & C1 \end{array}$$

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of polyamines as therapeutic and diagnostic agents) RN220221-56-7 CAPLUS CN Benzamide, 4-chloro-N-[[5-[[(6-oxo-7,11,16,20-tetraazadocos-1yl)amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

PAGE 1-A 0 0 EtNH- $(CH_2)_3$ -NH- $(CH_2)_4$ -NH- $(CH_2)_3$ -NH-C- $(CH_2)_5$ -NH-S

PAGE 1-B

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 6 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2003 ACS

AN 2000:553544 CAPLUS

DN 133:164201

ΤI Preparation of agmatine and polyamine analogs as antizyme modulators for use as drugs and agricultural agents

Vermeulin, Nicolaas M. J.; Burns, Mark R.; Webb, Heather K. IN

PA Oridigm Corporation, USA

SO PCT Int. Appl., 80 pp.

CODEN: PIXXD2

DTPatent

LΑ English

FAN.CNT 1

DATE KIND PATENT NO. APPLICATION NO. DATE ------____ ----------PΙ WO 2000-US2972 WO 2000046187. **A**2 20000810 20000204 WO 2000046187 Α3 20001214 AL, AM, AU, AZ, BA, BB, BG, BR, CA, CN, CU, CZ, EE, FI, GE, HU, IL, IS, JP, KG, KP, KR, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG EP 1159261 A2 20011205 EP 2000-913365 20,000204 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI JP 2000-597259 JP 2002536357 T2 20021029 20000204 PRAI US 1999-118892P Ρ 19990205 WO 2000-US2972 W 20000204

A polyamine analog of spermine comprising of four amine groups capable of AB forming four pos. charges at physiol. pH, wherein the first and second amine groups, and the third and fourth amine groups, are sepd. by the distance of four cC-C and or C-N bonds and the second and third amine are sepd. by the distance of five C-C and/or C-N bonds or more; wherein the the second and third amines are sepd. by a straight or branched

C2-10-alkyl, -alkenyl, -alkynyl, alkoxy, aliph.; C3-10-alicyclic, single or multi-ring arom. or aryl; aryl-substituted alkyl, alkenyl, alkynyl; multiring aryl-substituted aliph.; aliph.-substituted single or multi-ring arom.; alkyl-, alkenyl-, alkynyl-substituted aryl; single or multi-ring heterocyclic; single or multi-ring heterocyclic-substituted aliph.; aliph.-substituted arom.; heterocyclic-substituted alkyl, alkenyl, alkynyl; alkyl-, alkenyl-, alkynyl-substituted heterocycle and wherein said analog induces expression of full-length antizyme. The present invention is directed to agmatine and polyamine analogs and their use as drugs, as well as agricultural or environmentally useful agents. As drugs, the analogs decrease cellular polyamine levels, possibly by inducing antizyme, and can be used to treat disorders of undesired cell proliferation, including cancer, viral infections and bacterial infections. The analogs may be utilized in pharmaceutical compns. either alone or in combination with other agents, particularly other inhibitors of polyamine synthesis or transport, but including other inhibitors of cell proliferation. The analogs are not necessarily metabolized to contribute to the polyamine pool and are designed to enter cells by pathways independent of polyamine transport. The invention further defines structural elements/motifs within these analogs that are key to their induction of antizyme.

IT 287968-56-3P

RN

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of agmatine and polyamine analogs as antizyme modulators for use as drugs and agricultural agents)

287968-56-3 CAPLUS

CN Benzamide, N-[[5-[[6-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-6-oxohexyl]amino]sulfonyl]-2-thienyl]methyl]-4-chloro- (9CI) (CA INDEX NAME)

PAGE 1-B

L9 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2003 ACS

AN 1999:77533 CAPLUS

DN 130:153469

TI Novel polyamine analogs as therapeutic and diagnostic agents

PA Oridigm Corporation, USA

SO PCT Int. Appl., 143 pp. CODEN: PIXXD2

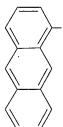
DT Patent

LA English

FAN.CNT 1

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KIND DATE
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      PATENT NO.
                                                                               DATE
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                 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
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      US 1998-85538P
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      WO 1998-US14896
                              W
                                     19980715
os
      MARPAT 130:153469
GΙ
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NHCONHCH2CH2CH2NHCH2CH2CH2CH2NHCH2CH2NH2

I

AB Title inhibitors RXR1 [R =H, or is a head group consisting of a straight or branched C1-10 aliph., alicyclic, single or multiring arom., single or multiring aryl substituted aliph., etc.; R1 is a polyamine; X = CO, NHCO, NHCS, SO2] and pharmaceutical acceptable salts of polyamine transport having inhibition consts. two orders of magnitude lower than those of known compds. are disclosed. These polyamine analogs are useful pharmaceutical agents for treating diseases where it is desired to inhibit polyamine transport or other polyamine binding proteins, for example cancer and post-angioplasty injury and the introduction of a 3-amidopropyl group to the diaminobutyl part of spermidine produce a significantly better transport inhibitor. Novel chem. synthetic methods to obtain polyamine analogs are disclosed, including the prodn. of a combinatorial polyamine library. These approaches yield analogs with desirable activities both for diagnostic and research assays and therapy. The assays of the invention are useful for high throughput screening of targets in the discovery of drugs that interact with the polyamine system. Thus, I was prepd. from 1-aminoanthracene, 4-nitrophenyl chloroformate, and spermine.

IT 220221-41-0P 220221-56-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(prepn. of polyamines as therapeutic and diagnostic agents)

RN 220221-41-0 CAPLUS

CN Benzamide, N-[[5-[[6-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-6-oxohexyl]amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

RN 220221-56-7 CAPLUS

CN Benzamide, 4-chloro-N-[[5-[[(6-oxo-7,11,16,20-tetraazadocos-1-yl)amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

EtNH-
$$(CH_2)_3$$
-NH- $(CH_2)_4$ -NH- $(CH_2)_3$ -NH-C- $(CH_2)_5$ -NH-S- $||$

PAGE 1-B

AN 1997:234254 CAPLUS

DN 126:225111

TI Hydroxamic acid derivatives useful for inhibiting gelatinase

IN Sakaki, Katsuhito; Kanazawa, Hidekazu; Sugiura, Tsuneyuki; Miyazaki, Tohru; Ohno, Hiroyuki

PA Ono Pharmaceutical Co., Ltd., Japan

SO Eur. Pat. Appl., 58 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

FAN.CNT 1				
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 757984	A1	19970212	EP 1996-305805	19960807 <
EP 757984	B1	20021030		
R: AT,	BE, CH, DI	E, DK, ES,	FI, FR, GB, GR, IE, IT	, LI, LU, NL, PT, SE
JP 09104672	A2	19970422	JP 1996-221749	19960805 <
US 6022893	A	20000208	US 1996-694473	19960807
AT 226936	E	20021115	AT 1996-305805	19960807
ES 2185750	Т3	20030501	ES 1996-305805	19960807
PRAI JP 1995-2226	73 A	19950808		
OS MARPAT 126:225111				
GI				

AB The invention relates to hydroxamic acid derivs. I [wherein R1 = H, or C1-4 alkyl; R2 = H, C1-8 alkyl, Ph, C1-4 alkyl substituted by Ph; E = CONR3, in which R3 = H, C1-4 alkyl, etc., NR3CO, CO2, OCO, etc; A = H, C1-8 alkyl, C3-7 cycloalkyl, or Ar; J = bond, C2-4 alkylene, etc.; G = (CH2)m, in which m = 2, 3, or 4, or CR6R7 in which R6 and R7 = H, C1-8 alkyl, etc.] and non-toxic salts thereof, as well as processes for their prepn., and pharmaceutical agents contg. them. I are useful for prevention and/or treatment of diseases induced by overexpression or excess activity of gelatinases, for example, rheumatoid diseases, arthrosteitis, unusual bone resorption, osteoporosis, periodontitis,

II

interstitial nephritis, arteriosclerosis, pulmonary emphysema, cirrhosis, corneal injury, metastasis/invasion/growth of tumor cells, autoimmune disease (Crohn's disease, Sjogren's syndrome, etc.), diseases caused by vascular emigration or infiltration of leukocytes, or arterialization, in animals and esp. in human beings. Approx. 13 I were prepd., and test results for 4 compds. are given. For instance, 4-O2NC6H4SO2Cl reacted with H2NCH2CO2CMe3.HCl in pyridine to give 4-O2NC6H4SO2NHCH2CO2CMe3, which underwent a sequence of hydrogenation to the amine, amidation with 4-MeC6H4COCl, deprotection of the tert-Bu ester with aq. CF3CO2H, amidation of the resultant acid with PhCH2ONH2.HCl, and hydrogenolytic debenzylation, to give title compd. II. In a test for inhibition of human gelatinase A in vitro, title compd. III had an IC50 of 0.00023 .mu.M.

=> d hitstr 7

L5 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2003 ACS

IT 188131-43-3P 188131-44-4P 188131-45-5P 188131-46-6P 188131-47-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. of hydroxamic acid derivs. as gelatinase inhibitors)

RN 188131-43-3 CAPLUS

CN Benzamide, 4-methyl-N-[4-[[[2-oxo-2-[(phenylmethoxy)amino]ethyl]amino]sulf onyl]phenyl]- (9CI) (CA INDEX NAME)

RN 188131-44-4 CAPLUS

CN Benzamide, N-[4-[[[2-oxo-2-[(phenylmethoxy)amino]ethyl]amino]sulfonyl]phen yl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & & & & \\ & & & & & \\ & & & & \\$$

RN 188131-45-5 CAPLUS

CN Benzamide, 4-methoxy-N-[4-[[[2-oxo-2-[(phenylmethoxy)amino]ethyl]amino]sul fonyl]phenyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} O & O & O \\ \parallel & \parallel & \parallel \\ S-NH-CH_2-C-NH-O-CH_2-Ph \\ \parallel & O \\ \end{array}$$

RN 188131-46-6 CAPLUS

CN Benzenepropanamide, .alpha.-[[[4-[(4-pentylbenzoyl)amino]phenyl]sulfonyl]a mino]-N-(phenylmethoxy)-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 188131-47-7 CAPLUS

CN 1H-Indole-3-propanamide, .alpha.-[[[4-[(4-methylbenzoyl)amino]phenyl]sulfonyl]amino]-N-(phenylmethoxy)-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

IT 188131-48-8P 188131-49-9P 188131-50-2P 188131-51-3P 188131-52-4P 188131-53-5P 188131-54-6P 188131-55-7P 188131-56-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of hydroxamic acid derivs. as gelatinase inhibitors)

RN 188131-48-8 CAPLUS

CN Benzamide, N-[4-[[[2-(hydroxyamino)-2-oxoethyl]amino]sulfonyl]phenyl]-4-methyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \bullet & \bullet & \bullet \\ \hline C-NH-OH & \bullet & \bullet \\ \hline S-NH-CH_2-C-NH-OH & \bullet \\ \hline 0 & \bullet & \bullet \\ \hline \end{array}$$

RN 188131-49-9 CAPLUS

CN Benzamide, N-[4-[[[2-(hydroxyamino)-2-oxoethyl]amino]sulfonyl]phenyl](9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \circ & \circ \\ \parallel & \parallel \\ \text{S-NH-CH}_2\text{-C-NH-OH} \\ \downarrow & \circ \\ \text{Ph-C-NH} \end{array}$$

RN 188131-50-2 CAPLUS

CN Benzamide, N-[4-[[[2-(hydroxyamino)-2-oxoethyl]amino]sulfonyl]phenyl]-4-methoxy- (9CI) (CA INDEX NAME)

RN 188131-51-3 CAPLUS

CN Benzenepropanamide, N-hydroxy-.alpha.-[[[4-[(4-pentylbenzoyl)amino]phenyl]sulfonyl]amino]-, (.alpha.R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 188131-52-4 CAPLUS

CN 1H-Indole-3-propanamide, N-hydroxy-.alpha.-[[[4-[(4-methylbenzoyl)amino]phenyl]sulfonyl]amino]-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 188131-53-5 CAPLUS

CN Benzamide, N-[3-[[[2-(hydroxyamino)-2-oxoethyl]amino]sulfonyl]phenyl]-(9CI) (CA INDEX NAME)

RN 188131-54-6 CAPLUS

CN Benzamide, N-[2-[[[2-(hydroxyamino)-2-oxoethyl]amino]sulfonyl]phenyl](9CI) (CA INDEX NAME)

RN 188131-55-7 CAPLUS

CN 2-Thiophenecarboxamide, N-[4-[[[2-(hydroxyamino)-1-methyl-2-oxoethyl]amino]sulfonyl]phenyl]-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 188131-56-8 CAPLUS

CN 2-Thiophenecarboxamide, N-[4-[[[2-(hydroxyamino)-1-methyl-2-oxoethyl]amino]sulfonyl]phenyl]- (9CI) (CA INDEX NAME)

AN 1999:556750 CAPLUS

DN 131:184758

TI Preparation of benzenesulfonylamine derivatives as matrix metalloproteinase inhibitors

IN Toyama, Takeshi; Toyama, Itaru; Yagisawa, Takashi; Noda, Atsushi; Kobayashi, Yoshinori

PA Kotobuki Seiyaku Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF
DT Patent

LA Japanese

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 11236369 A2 19990831 JP 1998-40122 19980223 <-PRAI JP 1998-40122 19980223

OS MARPAT 131:184758

GI

$$\begin{array}{c} \text{Me} \\ \text{Me-CH} \\ \text{CH}_2 \\ \text{HO}_2\text{C-CH}_2 - \text{N-SO}_2 \end{array} \\ \end{array}$$

AB The title compds. R2CH2N(CH2R1)SO2A [R1 = alkyl, etc.; R2 = CO2H, etc.; A = R4R5, etc.; R4 = phenylene, etc.; R5 = (un)substituted Ph, thienyl] are prepd. The title compd. I in vitro showed IC50 of 2.9 x 10-7 M against MMP-2.

IT 240415-88-7P 240415-97-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of benzenesulfonylamine derivs. as matrix metalloproteinase inhibitors)

RN 240415-88-7 CAPLUS

CN Benzamide, N-[4-[[[2-(hydroxyamino)-2-oxoethyl](2-methylpropyl)amino]sulfonyl]phenyl]-4-methoxy- (9CI) (CA INDEX NAME)

RN 240415-97-8 CAPLUS

CN 2-Thiophenecarboxamide, N-[4-[[(cyclohexylmethyl) [2-(hydroxyamino)-2-oxoethyl]amino]sulfonyl]phenyl]- (9CI) (CA INDEX NAME)

IT 240416-33-5P 240416-35-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of benzenesulfonylamine derivs. as matrix metalloproteinase inhibitors)

RN 240416-33-5 CAPLUS

CN Benzamide, 4-methoxy-N-[4-[[(2-methylpropyl)[2-oxo-2-[(phenylmethoxy)amino]ethyl]amino]sulfonyl]phenyl]- (9CI) (CA INDEX NAME)

RN 240416-35-7 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-methoxy-N-[4-[[(2-methylpropyl) [2-oxo-2-[(phenylmethoxy)amino]ethyl]amino]sulfonyl]phenyl]- (9CI) (CA INDEX NAME)

AN 1991:608506 CAPLUS

DN 115:208506

- TI Some novel sulfanilyl amino acid derivatives
- AU El-Sayed, Ragab A.
- CS Fac. Sci., Al-Azhar Univ., Nasr, Egypt
- SO Journal of the Serbian Chemical Society (1991), 56(6), 311-18 CODEN: JSCSEN; ISSN: 0352-5139
- DT Journal
- LA English
- AB The title amino acid derivs. 2,4-Cl2C6H4CONHC6H4SO2R-4 (I; R = X-OH; X = Gly, DL-Ala, .beta.-Ala, Val, DL-Val, Leu, DL-Leu, DL-Ser, Phe, Tyr) were prepd. by coupling of the corresponding amino acids with sulfonyl chloride I (R = Cl). Amino acid derivs I (R = X-OH) were esterified to give esters I (R = X-OMe) or coupled with amino acid esters to give dipeptide esters I (R = X-X1-OMe; X1 = Gly, DL-Ala, Leu). Esters I (R = X-OMe, X-X1-OMe) were also converted to the corresponding hydrazides I (R = X-NHNH2, X-X1-NHNH2). Prepd. amino acid and dipeptide derivs. I were active as bactericides and fungicides.

> d hitstr 9

IT 136714-01-7P 136714-02-8P 136714-03-9P 136714-04-0P 136714-05-1P 136714-06-2P 136714-22-2P 136714-23-3P 136714-24-4P 136714-25-5P 136714-26-6P 136714-27-7P

ANSWER 9 OF 19 CAPLUS COPYRIGHT 2003 ACS

136714-28-8P 136714-29-9P 136714-30-2P

136714-31-3P 136714-32-4P 136714-33-5P 136714-34-6P 136714-35-7P 136714-36-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(prepn. and bactericidal and fungicidal activity of)

RN 136714-01-7 CAPLUS

CN Alanine, N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-, hydrazide (9CI) (CA INDEX NAME)

RN 136714-02-8 CAPLUS

CN L-Valine, N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 136714-03-9 CAPLUS

CN Valine, N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-, hydrazide (9CI) (CA INDEX NAME)

RN 136714-04-0 CAPLUS

CN L-Leucine, N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 136714-05-1 CAPLUS

CN Serine, N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-, hydrazide (9CI) (CA INDEX NAME)

RN 136714-06-2 CAPLUS

CN L-Tyrosine, N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-, hydrazide (9CI) (CA INDEX NAME)

$$H_{2N}$$
 H_{2N}
 H_{3N}
 H

RN 136714-22-2 CAPLUS

RN 136714-23-3 CAPLUS

CN Glycine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-valyl]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$$

RN 136714-24-4 CAPLUS

CN Glycine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-leucyl]-, hydrazide (9CI) (CA INDEX NAME)

RN 136714-25-5 CAPLUS

CN Glycine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]leucyl]-, hydrazide (9CI) (CA INDEX NAME)

RN 136714-26-6 CAPLUS

CN Glycine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-tyrosyl]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

$$\begin{array}{c|c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & &$$

RN 136714-27-7 CAPLUS

CN Alanine, N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]alanyl-, hydrazide (9CI) (CA INDEX NAME)

RN 136714-28-8 CAPLUS

CN Alanine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-valyl]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 136714-29-9 CAPLUS

CN Alanine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-leucyl]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 136714-30-2 CAPLUS

CN Alanine, N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]leucyl-, hydrazide (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} H_2N & H & O \\ \hline Me & i-Bu & N \\ \hline H & S & O \\ \hline \end{array}$$

RN 136714-31-3 CAPLUS

CN Alanine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-tyrosyl]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$$

RN 136714-32-4 CAPLUS

CN L-Leucine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]alanyl]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 136714-33-5 CAPLUS

CN L-Leucine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-valyl]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Absolute stereochemistry.

RN 136714-36-8 CAPLUS
CN L-Leucine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-Ltyrosyl]-, hydrazide (9CI) (CA INDEX NAME)

RN 136714-08-4 CAPLUS
CN Glycine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-valyl]-,
methyl ester (9CI) (CA INDEX NAME)

MeO
$$i-Pr$$
 S N H O $C1$ N H

CN Glycine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-leucyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

MeO
$$i-Bu$$
 S N H O $C1$ H H $C1$

RN 136714-10-8 CAPLUS

CN Glycine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]leucyl]-, methyl ester (9CI) (CA INDEX NAME)

RN 136714-11-9 CAPLUS

CN Glycine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-tyrosyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 136714-12-0 CAPLUS

CN Alanine, N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]alanyl-, methyl ester (9CI) (CA INDEX NAME)

RN 136714-13-1 CAPLUS

CN Alanine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-valyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 136714-14-2 CAPLUS

CN Alanine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-leucyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

$$\begin{array}{c} & & & \\ & &$$

RN 136714-15-3 CAPLUS

CN Alanine, N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]leucyl-, methyl ester (9CI) (CA INDEX NAME)

RN 136714-16-4 CAPLUS
CN Alanine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-tyrosyl] , methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 136714-17-5 CAPLUS
CN L-Leucine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]alanyl]-,
 methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 136714-18-6 CAPLUS
CN L-Leucine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-valyl], methyl ester (9CI) (CA INDEX NAME)

RN 136714-19-7 CAPLUS
CN L-Leucine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-leucyl] , methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 136714-20-0 CAPLUS
CN L-Leucine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]leucyl]-,
 methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 136714-21-1 CAPLUS
CN L-Leucine, N-[N-[[4-[(2,4-dichlorobenzoyl)amino]phenyl]sulfonyl]-L-tyrosyl]-, methyl ester (9CI) (CA INDEX NAME)

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=> d l1 L1 HAS NO ANSWERS L1 STR 11 12 13 0 0 0 Cy~C~N~G1~Cy ~ S~ N~ C \sim C $\sim\sim$ N 3 4 5 6 7 8

REP G1=(0-3) CH2
NODE ATTRIBUTES:
NSPEC IS R AT 10
DEFAULT MLEVEL IS ATOM
GGCAT IS UNS AT 1
GGCAT IS UNS AT 5
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
PING(S) APE ISOLATED

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

=> s l1 ful FULL SEARCH INITIATED 16:23:19 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 16325 TO ITERATE

100.0% PROCESSED 16325 ITERATIONS 2 ANSWERS SEARCH TIME: 00.00.01

L3 2 SEA SSS FUL L1

=> d 1-2

L3 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2003 ACS

RN 103891-80-1 REGISTRY

CN Benzamide, N-[4-[[[5-amino-1-[[4-(phenylmethyl)-1-piperidinyl]carbonyl]pentyl]amino]sulfonyl]phenyl]-, (S)- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C31 H38 N4 O4 S

SR CA

LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L3 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2003 ACS

RN 57891-05-1 REGISTRY

CN Benzamide, 5-chloro-N-[2-[4-[[[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]amino]sulfonyl]phenyl]ethyl]-2-methoxy- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C23 H25 Cl N4 O5 S

LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1962 TO DATE)

3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

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SINCE FILE TOTAL ENTRY SESSION 152.71 152.92

FULL ESTIMATED COST

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FILE COVERS 1907 - 5 Mar 2003 VOL 138 ISS 10 FILE LAST UPDATED: 4 Mar 2003 (20030304/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13

L4

=> d bib abs hitstr 1-4

L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1986:497950 CAPLUS

DN 105:97950

TI Lysine derivative and proteinase inhibitor

IN Okamoto, Shosuke; Okada, Yoshio; Okunomiya, Akiko; Naito, Taketoshi; Yamada, Morihiko; Kimura, Yoshio; Katsuura, Yasuhiro; Suzuki, Hiroshi; Ohno, Norio; Seki, Yumi

PA Showa Denko K. K., Japan

SO Eur. Pat. Appl., 86 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

CNT I				
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 183271	A2	19860604	EP 1985-115142	19851129
EP 183271	A 3	19870520		
EP 183271	B1	19900516		
R: CH, DE,	FR, GB	, LI, SE		
JP 61130268	A2	19860618	JP 1984-251985	19841130
JP 61189255	A2	19860822	JP 1985-26556	19850215
JP 61218565	A2	19860929	JP 1985-56153	19850322
JP 62005945	A2	19870112	JP 1985-143852	19850702
JP 1984-251985		19841130		
JP 1985-26556		19850215		
JP 1985-56153		19850322		
JP 1985-143852		19850702		
	PATENT NO	PATENT NO. KIND	PATENT NO. KIND DATE EP 183271 A2 19860604 EP 183271 B1 19900516 R: CH, DE, FR, GB, LI, SE JP 61130268 A2 19860618 JP 61189255 A2 19860822 JP 61218565 A2 19860929 JP 62005945 A2 19870112 JP 1984-251985 19841130 JP 1985-26556 19850322	PATENT NO. KIND DATE APPLICATION NO. EP 183271 A2 19860604 EP 1985-115142 EP 183271 B1 19900516 R: CH, DE, FR, GB, LI, SE JP 61130268 A2 19860618 JP 1984-251985 JP 61189255 A2 19860822 JP 1985-26556 JP 61218565 A2 19860929 JP 1985-56153 JP 62005945 A2 19870112 JP 1985-143852 JP 1984-251985 19841130 JP 1985-26556 19850215 JP 1985-56153 19850322

AB Lysines R1Z1-Lys-R2 (R1 = carbocyclic or heterocyclic aryl; Z1 = SO2, CO; R2 = NH2, substituted amino), which were prepd., showed plasmin inhibition activity. N2-(p-Toluenesulfonyl)-L-lysine 4-benzylpiperidide was prepd. from N6-(benzyloxycarbonyl)lysine in a series of reactions.

IT 103891-80-1P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, as plasmin inhibitor)

RN 103891-80-1 CAPLUS

CN Benzamide, N-[4-[[[5-amino-1-[[4-(phenylmethyl)-1-piperidinyl]carbonyl]pentyl]amino]sulfonyl]phenyl]-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

$$\begin{array}{c|c}
 & H_2N \\
 & O \\
 & O \\
 & N \\
 & H \\
 & O \\
 & Ph \\
 & Ph \\
 & O \\
 & Ph \\
 & O \\$$

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1977:484998 CAPLUS

DN 87:84998

TI Pyrazole derivatives

PA Kyorin Pharmaceutical Co., Ltd., Japan

SO Fr. Demande, 21 pp.

CODEN: FRXXBL

DT Patent

LA	French
E12.31	CINTED 1

FAN.	CNT I				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	FR 2312242	Al	19761224	FR 1975-16940	19750530
	FR 2312242	B1	19800430		
PRAI	FR 1975-16940		19750530		
GI					

$$R \longrightarrow SO_2NHCHR^1 (CH_2)_nCON_N$$
 Me I

Pyrazoles I [R = MeCONHCH2CH2, Cl, EtO2CNHCH2CH2, Rl = H, n = 0, 1; R = H, pyrazinylcarboxamidoethyl, Rl = H, n = 1; R = 5,2-Cl(MeO)C6H3CONHCH2CH2, cyclohexyl, Me2CHCH2, Rl = H, n = 0; R = Cl, Rl = Ph, Me, CH2Ph, n = 0] were prepd. by cyclyzing 4-RC6H4SO2NHCHR1(CH2)nCONHNH2 with Ac2CH2. I are antidiabetics. Thus, I [R = 5,2-Cl(MeO)C6H3CONHCH2CH2, Rl = H, n = 0] at 100 mg/kg orally in rats caused a 48.1% decrease in blood sugar level 2 h after administration.

IT 57891-05-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. and antidiabetic activity of)

RN 57891-05-1 CAPLUS

CN Benzamide, 5-chloro-N-[2-[4-[[[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]amino]sulfonyl]phenyl]ethyl]-2-methoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1977:89810 CAPLUS

DN 86:89810

TI Pyrazole derivatives

IN Irikura, Tsutomu

PA Kyorin Pharmaceutical Co., Ltd., Japan

SO Belg., 24 pp. CODEN: BEXXAL

DT Patent

LA French

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI BE 829785 Al 19751001 BE 1975-156955 19750602

PRAI BE 1975-156955 19750602

$$R = SO_2NHCHR^1 (CH_2)_nCON$$
 Me

AB Pyrazoles I (R = H, AcNHCH2CH2, pyrazinnylcarboxamidoethyl, EtO2CNHCH2CH2, Cl, Rl = H, n = 1; R = Cl, AcNHCH2CH2, EtO2CNHCH2CH2, 5,2-Cl(MeO)C6H3CONHCH2CH2, cyclohexyl, Me2CHCH2, Rl = H, n = 0; R = Cl, Rl = Ph, Me, PhCH2, n = 0) were prepd. by condensing 4-RC6H4SO2NHCHR1:CH2)nCONHNH2 with Ac2CH2. I at 100 mg/kg orally in rats gave 22.1-51.3% decrease in blood sugar level.

RN 57891-05-1 CAPLUS

CN Benzamide, 5-chloro-N-[2-[4-[[[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]amino]sulfonyl]phenyl]ethyl]-2-methoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1976:59445 CAPLUS

DN 84:59445

TI Antidiabetic pyrazoles

IN Irikura, Tsutomu

PA Kyorin Pharmaceutical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp. CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE PΙ JP 50070367 19750611 JP 1973-121974 A2 19731030 19770927 JP 52038033 B4 PRAI JP 1973-121974 19731030

GI For diagram(s), see printed CA Issue.

Pyrazoles I [R = 2-acetylaminoethyl (Q), 2-ethoxycarbonylaminoethyl, 2-(2-methoxy-5-chlorobenzoylamino)ethyl, 2-(2-pyrazinecarbonylamino)ethyl (Q1), Me, iso-Bu, cyclohexyl, Cl; R1 = H, Me, Ph, pentyl; n = 0-1 when R1 = H; n = O when R1 = Me, Ph, pentyl] were prepd. by reaction of p-RC6H4SO2NHCHR1(CH2)nCONHNH2 with AcCH2Ac. Thus, refluxing 10 g N-benzenesulfonyl-.beta.-alanine hydrazide with 5 g AcCH2Ac in EtOH 3 hr gave 99% I (R = R1 = H, n = 1). Among 15 more I prepd. were the following

I (R, R1, n given): Me, H, 1; Q, H, 1; Q1, H, 1; and C1, H, 0.

IT 57891-05-1P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. and antiadiabetic activity of)

RN 57891-05-1 CAPLUS

CN Benzamide, 5-chloro-N-[2-[4-[[[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]amino]sulfonyl]phenyl]ethyl]-2-methoxy- (9CI) (CA INDEX NAME)

=> d l1

L1 HAS NO ANSWERS

L1 STR

VAR G1=7/8/9 NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RSPEC 8 4

NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE

=> s l1 ful

FULL SEARCH INITIATED 08:02:43 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 475 TO ITERATE

100.0% PROCESSED 475 ITERATIONS

12 ANSWERS

SEARCH TIME: 00.00.01

L3 12 SEA SSS FUL L1

=> d 1-12

L3 ANSWER 1 OF 12 REGISTRY COPYRIGHT 2003 ACS

RN 213475-13-9 REGISTRY

CN Glycine, N-[[4-[[(2,4-dichlorobenzoyl)amino]methyl]phenyl]sulfonyl]-L-leucyl-, methyl ester (9CI) (CA INDEX NAME)

FS STEREOSEARCH

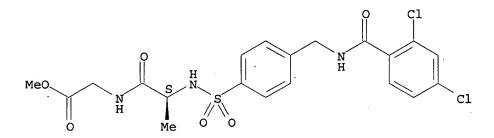
MF C23 H27 Cl2 N3 O6 S

SR CA

LC STN Files: CA, CAPLUS

- 3 REFERENCES IN FILE CA (1957 TO DATE)
- 3 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L3 ANSWER 2 OF 12 REGISTRY COPYRIGHT 2003 ACS
- RN 213475-12-8 REGISTRY
- CN Glycine, N-[[4-[[(2,4-dichlorobenzoyl)amino]methyl]phenyl]sulfonyl]-L-alanyl-, methyl ester (9CI) (CA INDEX NAME)
- FS STEREOSEARCH
- MF C20 H21 Cl2 N3 O6 S
- SR CA
- LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 3 REFERENCES IN FILE CA (1957 TO DATE)
- 3 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L3 ANSWER 3 OF 12 REGISTRY COPYRIGHT 2003 ACS
- RN 213475-11-7 REGISTRY
- CN Glycine, N-[[4-[[(2,4-dichlorobenzoyl)amino]methyl]phenyl]sulfonyl]glycyl, methyl ester (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C19 H19 Cl2 N3 O6 S
- SR CA
- LC STN Files: CA, CAPLUS

- 3 REFERENCES IN FILE CA (1957 TO DATE)
- 3 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L3 ANSWER 4 OF 12 REGISTRY COPYRIGHT 2003 ACS
- RN 213474-98-7 REGISTRY
- CN Glycine, N-[[4-[[(4-chlorobenzoyl)amino]methyl]phenyl]sulfonyl]-L-tyrosyl, methyl ester (9CI) (CA INDEX NAME)
- FS STEREOSEARCH
- MF C26 H26 Cl N3 O7 S
- SR CA
- LC STN Files: CA, CAPLUS

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 3 REFERENCES IN FILE CA (1957 TO DATE)
- 3 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L3 ANSWER 5 OF 12 REGISTRY COPYRIGHT 2003 ACS
- RN 213474-97-6 REGISTRY
- CN Glycine, N-[[4-[[(4-chlorobenzoyl)amino]methyl]phenyl]sulfonyl]-L-leucyl-, methyl ester (9CI) (CA INDEX NAME)
- FS STEREOSEARCH
- MF C23 H28 Cl N3 O6 S
- SR CA
- LC STN Files: CA, CAPLUS

- 3 REFERENCES IN FILE CA (1957 TO DATE)
- 3 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L3 ANSWER 6 OF 12 REGISTRY COPYRIGHT 2003 ACS
- RN 213474-96-5 REGISTRY
- CN Glycine, N-[[4-[[(4-chlorobenzoyl)amino]methyl]phenyl]sulfonyl]glycyl-, methyl ester (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C19 H20 Cl N3 O6 S
- SR CA
- LC STN Files: CA, CAPLUS

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 3 REFERENCES IN FILE CA (1957 TO DATE)
- 3 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L3 ANSWER 7 OF 12 REGISTRY COPYRIGHT 2003 ACS
- RN 213474-94-3 REGISTRY
- CN L-Leucine, N-[[4-[[(4-chlorobenzoyl)amino]methyl]phenyl]sulfonyl]-, hydrazide (9CI) (CA INDEX NAME)
- FS STEREOSEARCH
- MF C20 H25 Cl N4 O4 S
- SR CA
- LC STN Files: CA, CAPLUS

- 3 REFERENCES IN FILE CA (1957 TO DATE)
- 3 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L3 ANSWER 8 OF 12 REGISTRY COPYRIGHT 2003 ACS
- RN 213474-92-1 REGISTRY
- FS STEREOSEARCH
- MF C19 H23 Cl N4 O4 S
- SR CA
- LC STN Files: CA, CAPLUS

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 3 REFERENCES IN FILE CA (1957 TO DATE)
- 3 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L3 ANSWER 9 OF 12 REGISTRY COPYRIGHT 2003 ACS
- RN 213474-90-9 REGISTRY
- CN Alanine, N-[[4-[[(4-chlorobenzoyl)amino]methyl]phenyl]sulfonyl]-, hydrazide (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C17 H19 Cl N4 O4 S
- SR CA
- LC STN Files: CA, CAPLUS

3 REFERENCES IN FILE CA (1957 TO DATE)

3 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L3 ANSWER 10 OF 12 REGISTRY COPYRIGHT 2003 ACS

RN 213474-88-5 REGISTRY

FS 3D CONCORD

MF C16 H17 Cl N4 O4 S

SR CA

LC STN Files: CA, CAPLUS

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1957 TO DATE)

3 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L3 ANSWER 11 OF 12 REGISTRY COPYRIGHT 2003 ACS

RN 91663-07-9 REGISTRY

CN Ethanediamide, N-[[4-[(benzoylamino)methyl]phenyl]sulfonyl]-N'-butyl(9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C20 H23 N3 O5 S

LC STN Files: CA, CAPLUS

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L3 ANSWER 12 OF 12 REGISTRY COPYRIGHT 2003 ACS

RN 91663-06-8 REGISTRY

CN Ethanediamide, {[4-[(benzoylamino)methyl]phenyl]sulfonyl]- (9CI) (CA

INDEX NAME)

FS 3D CONCORD

MF C16 H15 N3 O5 S

LC STN Files: CA, CAPLUS

$$H_2N-C-C-NH-S$$
 $CH_2-NH-C-Ph$

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 1 REFERENCES IN FILE CA (1957 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> s 13

L4 4 L3

=> d bib abs 1-4

L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1999:108539 CAPLUS

DN 130:223580

TI A facile synthesis and some new reactions of N-benzylcarboxamides with essential amino acids

AU El-Sayed, Ragab A.

CS Chemistry Department, Faculty of Science, Al-Azhar University, Nasr City, Egypt

SO Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1998), 37B(10), 1059-1062 CODEN: IJSBDB; ISSN: 0376-4699

PB National Institute of Science Communication, CSIR

DT 'Journal

LA English

GI

$$C1$$
 $CO-NH-CH_2$ SO_2-C1

N-benzyl-4-chlorobenzamide and N-benzyl-2,4-dichlorobenzamide react with chlorosulfonic acid to give the corresponding p-sulfonyl chlorides I (X = H, Cl), which on condensation with amino acids give amino acid derivs. II (R = H, Me, CHMe2, CH2CHMe2, CH2Ph, CH2C6H6OH-4; X = H, Cl; Y = OH). Some of the corresponding Me esters II (X = H; R = H, Me, CHMe2, CH2CHMe2; Y = OMe) are also prepd. Hydrazinolysis of these Me esters yield the hydrazides II (X = H; R = H, Me, CHMe2, CH2CHMe2, Y = NHNH2). Coupling reactions of some amino acid derivs. with H-Gly-OMe hydrochloride in THF-Et3N medium using the dicyclohexylcarbodiimide method furnishes the desired dipeptide Me esters II (X = H, Cl; R = H, Me, CH2C6H6OH-4, CH2CHMe2; Y = NHCH2CO2Me). The spectral data are briefly discussed.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1998:659430 CAPLUS

DN 130:38661

TI A facile synthesis and some new reactions of N-benzylcarboxamides with essential amino acids

AU El-Sayed, Ragab A.

CS Chemistry Department, Faculty of Science, Al-Azhar Univ., CAIRO, Egypt

SO Phosphorus, Sulfur and Silicon and the Related Elements (1997), 131, 207-213

CODEN: PSSLEC; ISSN: 1042-6507

- PB Gordon & Breach Science Publishers
- DT Journal
- LA English
- AB N-Benzyl-p-chloro- and N-Benzyl-2,4-dichlorobenzamide react with chlorosulfonic acid to give the corresponding p-sulfonyl chlorides, which condensed with nucleophiles to give amino acid derivs. Me esterification, hydrazinolysis, and coupling reactions of the amino acid derivs. are described.
- RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS
- AN 1998:541520 CAPLUS
- DN 129:260836
- TI A facile synthesis and some new reactions of N-benzylcarboxamides with essential amino acids
- AU El-Sayed, Ragab A.
- CS Chemistry Department, Faculty of Science, Al-Azhar University, Nasr, Egypt
- SO Journal of the Serbian Chemical Society (1998), 63(8), 601-606 CODEN: JSCSEN; ISSN: 0352-5139

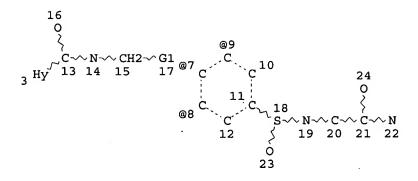
Ι

- PB Serbian Chemical Society
- DT Journal
- LA English
- GI

$$\begin{array}{c|c} \text{Cl} & \text{SO}_2\mathbb{R}^2 \\ & &$$

- N-Benzyl-p-chloro and N-benzyl-2,4-dichlorobenzamide react with chlorosulfonic acid to give the corresponding p-sulfonyl chlorides I (R1 = H, C1; R2 = C1) which on condensation with nucleophiles give amino acid derivs. I (R1 = H; R2 = X1-OH; X1 = Gly, DL-Ala, Val, DL-Val, Leu, Tyr; and R1 = C1; R2 = X2-OH; X2 = Gly, Ala, Val, Leu, Tyr, Phe). Some of the corresponding Me esters I (R1 = H, R2 = X3-OMe; X3 = Gly, DL-Ala, Val, Leu) were also prepd. Hydrazinolysis of these Me esters yielded the hydrazides I (R1 = H, R2 = X3-N2H3; X3 = same). Coupling reactions of some amino acid derivs. with amino acid Me ester hydrochloride in THF-Et3N medium, using the dicylohexylcarbodiimide method, furnished the desired dipeptide Me esters I (R1 = H; R2 = X4-Gly-OMe; X4 = Gly, Leu, Tyr; and R1 = C1; R2 = X5-Gly-OMe; X5 = Gly, Ala, Leu). The spectral data are briefly discussed.
- RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L4 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS
- AN 1984:510479 CAPLUS
- DN 101:110479
- TI Synthesis and properties of esters of [4-[(acylamido)methyl]benzenesulfony l]oxamic acids
- AU Petyunin, P. A.; Valyashko, N. N.; Shemchuk, L. A.; Konev, V. F.; Stoletov, Yu. V.; Klebanov, B. M.
- CS Khar'k. Gos. Farm. Inst., Kharkov, USSR
- SO Deposited Doc. (1982), SPSTL 1220 Khp-D82, 9 pp. Avail.: SPSTL
- DT Report
- LA Russian
- AB p-H2NSO2C6H4CH2NHR (I; R = H) reacted with R1COX (R1 = Me, Ph, 4-tolyl,

4-O2NC6H4, 2-ClC6H4; X = halo) and with R2SO2Cl (R2 = Ph, 4-tolyl, 4-ACNHC6H4, 2-ClC6H4, 2-BrC6H4, 4-O2NC6H4) to give 11 corresponding I (R = COR1, SO2R2) (II) in 43-84% yield. II condensed with (CO2Et)2 in MeOH contg. NaOMe to give 56-89% yield of 9 corresponding p-R3COCONHSO2C6H4CH2NHR (III; R3 = EtO), which gave 67-96% III (R = Bz, R3 = H2N, BuNH; R = p-tosyl, R3 = H2N, H2NNH, cyclohexylamino) (IV) with the resp. R3H. IV had hypoglycemic activity (no data).



VAR G1=7/8/9 ENTER (DIS), GRA, NOD, BON OR ?:end L14 STRUCTURE CREATED

=> s 114 ·

SAMPLE SEARCH INITIATED 08:07:32 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 28 TO ITERATE

100.0% PROCESSED 28 ITERATIONS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 243 TO 877

PROJECTED ANSWERS: 0 TO 0

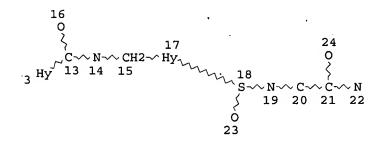
L15 0 SEA SSS SAM L14

=> s 114 ful FULL SEARCH INITIATED 08:07:35 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 505 TO ITERATE

100.0% PROCESSED 505 ITERATIONS 0 ANSWERS SEARCH TIME: 00.00.01

0 ANSWERS

L16 0 SEA SSS FUL L14



ENTER (DIS), GRA, NOD, BON OR ?:end L17 STRUCTURE CREATED

=> s 117

SAMPLE SEARCH INITIATED 08:08:43 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED - 887 TO ITERATE

100.0% PROCESSED 887 ITERATIONS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

19526

PROJECTED ITERATIONS: 15954 TO O TO

PROJECTED ANSWERS:

0 SEA SSS SAM L17

=> s l17 ful

FULL SEARCH INITIATED 08:08:47 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 17448 TO ITERATE

100.0% PROCESSED 17448 ITERATIONS

SEARCH TIME: 00.00.01

L19 0 SEA SSS FUL L17 0 ANSWERS

0 ANSWERS

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY UNS AT 3
GGCAT IS MCY UNS AT 17
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

=> s 120 ful FULL SEARCH INITIATED 08:09:47 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 17448 TO ITERATE

100.0% PROCESSED 17448 ITERATIONS 18 ANSWERS SEARCH TIME: 00.00.01

L22 18 SEA SSS FUL L20

=> s 122 not 13 L23 6 L22 NOT L3

=> d 1-6

L23 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2003 ACS

RN 334870-26-7 REGISTRY

CN Benzamide, N-[[5-[[(1S)-1-[[(2,3-dihydro-1-methyl-2-oxo-5-phenyl-1H-1,4-benzodiazepin-3-yl)amino]carbonyl]-3-methylbutyl]amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C34 H35 N5 O5 S2

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

- 2 REFERENCES IN FILE CA (1957 TO DATE)
- 2 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L23 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2003 ACS
- RN 332082-85-6 REGISTRY
- CN Benzamide, 4-chloro-N-[[5-[[[2-oxo-2-[[2-[[5-(trifluoromethyl)-2-pyridinyl]amino]ethyl]amino]ethyl]amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C22 H21 Cl F3 N5 O4 S2
- SR CA
- LC STN Files: CA, CAPLUS

PAGE 1-A

PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 1 REFERENCES IN FILE CA (1957 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)
- L23 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2003 ACS
- RN 332082-84-5 REGISTRY
- CN Benzamide, 4-chloro-N-[[5-[[[2-oxo-2-[[2-[[3-(trifluoromethyl)-2-pyridinyl]amino]ethyl]amino]ethyl]amino]sulfonyl]-2-thienyl]methyl]- (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C22 H21 Cl F3 N5 O4 S2
- SR CA
- LC STN Files: CA, CAPLUS

PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L23 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2003 ACS

RN 332082-83-4 REGISTRY

CN Benzamide, 4-chloro-N-[[5-[[[2-[[2-[(5-nitro-2-

pyridinyl)amino]ethyl]amino]-2-oxoethyl]amino]sulfonyl]-2-thienyl]methyl]-

(9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C21 H21 Cl N6 O6 S2

SR CA

LC STN Files: CA, CAPLUS

PAGE 1-A

PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L23 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2003 ACS

RN 332082-82-3 REGISTRY

CN Benzamide, 4-chloro-N-[[5-[[2-[[2-[[3-chloro-5-(trifluoromethy1)-2-pyridinyl]amino]ethyl]amino]-2-oxoethyl]amino]sulfonyl]-2-thienyl]methyl]-(9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C22 H20 Cl2 F3 N5 O4 S2

SR CA

LC STN Files: CA, CAPLUS

PAGE 1-A

PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L23 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2003 ACS

RN 330162-52-2 REGISTRY

CN Benzamide, N-[[5-[[(1S)-1-[[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]carbonyl]-2-methylpropyl]amino]sulfonyl]-2-thienyl]methyl]-4-chloro-(9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C27 H43 Cl N6 O4 S2

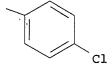
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.

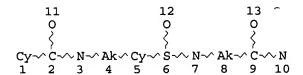
PAGE 1-A

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 $(CH_2)_4$
 $(CH_2)_3$
 $(CH_2)_4$
 $(CH_2)_4$
 $(CH_2)_5$
 $(CH_2)_5$
 $(CH_2)_6$
 $(CH_2)_6$



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 2 REFERENCES IN FILE CA (1957 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1957 TO DATE)



ENTER (DIS), GRA, NOD, BON OR ?:end L1 STRUCTURE CREATED

=> 8 11

SAMPLE SEARCH INITIATED 08:26:08 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED - 4280 TO ITERATE

23.4% PROCESSED 1000 ITERATIONS INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED) SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

0 ANSWERS

3 ANSWERS

PROJECTED ITERATIONS: 81678 TO 89522

PROJECTED ANSWERS: 0 TO

L2 0 SEA SSS SAM L1

=> s l1 ful FULL SEARCH INITIATED 08:26:12 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 84394 TO ITERATE

100.0% PROCESSED 84394 ITERATIONS

SEARCH TIME: 00.00.02

L3 3 SEA SSS FUL L1

=> s 13

L4 4 L3

=> d bib abs hitstr 1-4

L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1979:121590 CAPLUS

DN 90:121590

TI Novel pyrazole derivatives

IN Irikura, Tsutomu

PA Kyorin Pharmaceutical Co., Ltd., Japan

SO Brit., 14 pp. CODEN: BRXXAA

DT Patent

LA English

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI GB 1505518 A 19780330 GB 1975-23637 19750530

PRAI GB 1975-23637 19750530

$$R = SO_2NHCHR^1 (CH_2)_nCO - N Me$$
Me
Me
Me
Me

AB The prepn. is described of pyrazoles I [R = AcNH(CH2)2, EtO2CNH(CH2)2, 5,2-Cl(MeO)C6H3CONH(CH2)2, 2-(2-pyrazinecarbonylamino)ethyl, Me2CHCH2, cyclohexyl, Cl; n = 0 or 1 when R1 = H; n = 0 when R1 = Me, Ph, PhCH2]. Thus, I (R = Cl, R1 = H, n = 0) was prepd. (60.3%) by treating 4-ClC6H4SO2NHCH2CONHNH2 with (MeCO)2CH2. Pharmacol. studies showed that I are very useful as antidiabetic agents.

IT 57890-99-0P 69497-54-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (antidiabetic agent, prepn. of)

RN 57890-99-0 CAPLUS

CN Pyrazinecarboxamide, N-[2-[4-[[[3-(3,5-dimethyl-1H-pyrazol-1-yl)-3-oxopropyl]amino]sulfonyl]phenyl]ethyl]- (9CI) (CA INDEX NAME)

RN 69497-54-7 CAPLUS

CN Benzamide, 5-chloro-N-[2-[4-[[[3-(3,5-dimethyl-1H-pyrazol-1-yl)-3-oxopropyl]amino]sulfonyl]phenyl]ethyl]-2-methoxy- (9CI) (CA INDEX NAME)

Me N— C—
$$CH_2$$
— CH_2 — $CH_$

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1977:484998 CAPLUS

DN 87:84998

TI Pyrazole derivatives

PA Kyorin Pharmaceutical Co., Ltd., Japan

SO Fr. Demande, 21 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2312242 FR 2312242	A1 B1	19761224 19800430	FR 1975-16940	19750530
PRAI GI	FR 1975-16940	ы	19750530		

$$R - \begin{cases} SO_2NHCHR^1 (CH_2)_n CON \\ N \end{cases} Me I$$

AB Pyrazoles I [R = MeCONHCH2CH2, Cl, EtO2CNHCH2CH2, Rl = H, n = 0, 1; R = H, pyrazinylcarboxamidoethyl, Rl = H, n = 1; R = 5,2-Cl(MeO)C6H3CONHCH2CH2, cyclohexyl, Me2CHCH2, Rl = H, n = 0; R = Cl, Rl = Ph, Me, CH2Ph, n = 0] were prepd. by cyclyzing 4-RC6H4SO2NHCHR1(CH2)nCONHNH2 with Ac2CH2. I are antidiabetics. Thus, I [R = 5,2-Cl(MeO)C6H3CONHCH2CH2, Rl = H, n = 0] at 100 mg/kg orally in rats caused a 48.1% decrease in blood sugar level 2 h after administration.

IT 57890-99-0P 57891-05-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. and antidiabetic activity of)

RN 57890-99-0 CAPLUS

CN Pyrazinecarboxamide, N-[2-[4-[[[3-(3,5-dimethyl-1H-pyrazol-1-yl)-3-oxopropyl]amino]sulfonyl]phenyl]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c}
 & O \\
 & O \\$$

RN 57891-05-1 CAPLUS

CN Benzamide, 5-chloro-N-[2-[4-[[[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]amino]sulfonyl]phenyl]ethyl]-2-methoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1977:89810 CAPLUS

DN 86:89810

TI Pyrazole derivatives

IN Irikura, Tsutomu

PA Kyorin Pharmaceutical Co., Ltd., Japan

SO Belg., 24 pp. CODEN: BEXXAL

DT Patent

LA French

FAN.CNT 1

•	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	BE 829785	A1	19751001	BE 1975-156955	19750602
PRAI	BE 1975-156955		19750602		
GI				•	

$$R = \frac{\text{Me}}{\text{SO}_2\text{NHCHR}^1 (\text{CH}_2)_n \text{CON}} \text{Me}$$

AB Pyrazoles I (R = H, AcNHCH2CH2, pyrazinnylcarboxamidoethyl, EtO2CNHCH2CH2, Cl, Rl = H, n = 1; R = Cl, AcNHCH2CH2, EtO2CNHCH2CH2, 5,2-Cl(MeO)C6H3CONHCH2CH2, cyclohexyl, Me2CHCH2, Rl = H, n = 0; R = Cl, Rl = Ph, Me, PhCH2, n = 0) were prepd. by condensing 4-RC6H4SO2NHCHR1:CH2)nCONHNH2 with Ac2CH2. I at 100 mg/kg orally in rats gave 22.1-51.3% decrease in blood sugar level.

TT 57890-99-0P 57891-05-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. and antidiabetic activity of)

RN 57890-99-0 CAPLUS

CN Pyrazinecarboxamide, N-[2-[4-[[[3-(3,5-dimethyl-1H-pyrazol-1-yl)-3-oxopropyl]amino]sulfonyl]phenyl]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c}
 & O \\
 & O \\$$

RN 57891-05-1 CAPLUS

CN Benzamide, 5-chloro-N-[2-[4-[[[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]amino]sulfonyl]phenyl]ethyl]-2-methoxy- (9CI) (CA INDEX NAME)

Me N C-
$$CH_2$$
- NH - C O CH_2 - CH_2 - NH - C O CH_2 - CH_2 - NH - C O CH_2 - CH_2 -

L4 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1976:59445 CAPLUS

DN 84:59445

TI Antidiabetic pyrazoles

IN Irikura, Tsutomu

PA Kyorin Pharmaceutical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

FAN.	CNT I				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 50070367	A2	19750611	JP 1973-121974	19731030
	JP 52038033	B 4	19770927		
PRAI	JP 1973-121974		19731030		
	_ ' - ' ' . ' '				

GI For diagram(s), see printed CA Issue.

Pyrazoles I [R = 2-acetylaminoethyl (Q), 2-ethoxycarbonylaminoethyl, 2-(2-methoxy-5-chlorobenzoylamino)ethyl, 2-(2-pyrazinecarbonylamino)ethyl (Q1), Me, iso-Bu, cyclohexyl, Cl; R1 = H, Me, Ph, pentyl; n = 0-1 when R1 = H; n = 0 when R1 = Me, Ph, pentyl] were prepd. by reaction of p-RC6H4SO2NHCHR1(CH2)nCONHNH2 with AcCH2Ac. Thus, refluxing 10 g N-benzenesulfonyl-.beta.-alanine hydrazide with 5 g AcCH2Ac in EtOH 3 hr gave 99% I (R = R1 = H, n = 1). Among 15 more I prepd. were the following I (R, R1, n given): Me, H, 1; Q, H, 1; Q1, H, 1; and Cl, H, 0.

IT 57890-99-0P 57891-05-1P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. and antiadiabetic activity of)

RN 57890-99-0 CAPLUS

CN Pyrazinecarboxamide, N-[2-[4-[[[3-(3,5-dimethyl-1H-pyrazol-1-yl)-3-oxopropyl]amino]sulfonyl]phenyl]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c}
 & O \\
 & O \\$$

RN

57891-05-1 CAPLUS
Benzamide, 5-chloro-N-[2-[4-[[[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]amino]sulfonyl]phenyl]ethyl]-2-methoxy- (9CI) (CA INDEX NAME) CN

=> fil reg COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE ENTRY SESSION 18.98 173.58

```
1998:87604 CAPLUS
AN
DN
     128:167263
     Preparation of N-(mercaptoethyl)(benzene or alkyl)sulfonamide derivatives
TI
     or their disulfides as metalloprotease inhibitors
     Decrescenzo, Gary; Abbas, Zaheer S.; Freskos, John N.; Getman, Daniel P.;
IN
     Heintz, Robert M.; Mischke, Brent V.; et al.
     Monsanto Co., USA; Decrescenzo, Gary; Abbas, Zaheer S.; Freskos, John N.;
PA
     Getman, Daniel P.
SO
     PCT Int. Appl., 301 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                                           APPLICATION NO.
                                                             DATE
     PATENT NO.
                      KIND
                            DATE
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                            _____
                                           WO 1997-US12873 19970722
                            19980129
PΙ
     WO 9803166
                       A1
             AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
             DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
             RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,
             GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,
             GN, ML, MR, NE, SN, TD, TG
                                           AU 1997-38903
                                                             19970722
                       A1
                            19980210
     AU 9738903
     AU 740263
                       B2
                            20011101
                            19990817
                                            BR 1997-10752
                                                             19970722
     BR 9710752
                       Α
                            19990908
                                            EP 1997-936168
                                                             19970722
     EP 939629
                       A1
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI
    CN 1238688
                       Α
                            19991215
                                            CN 1997-197980
                                                             19970722
                            20001027
                                            NZ 1997-333825
                                                             19970722
     NZ 333825
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                       T2
                                            JP 1998-507195
                                                             19970722
     JP 2000515153
                            20001114
                                           NZ 1997-506464
                                                             19970722
     NZ 506464
                       Α
                            20020628
                                           NO 1999-247
                                                             19990120
     NO 9900247
                       Α
                            19990319
                       Р
                            19960722
PRAI US 1996-22040P
     NZ 1997-333825
                       A1
                            19970722
     WO 1997-US12873
                       W
                            19970722
OS
     MARPAT 128:167263
GI
```

$$\begin{array}{c} R^2 \\ N \\ SO_2 \end{array} \longrightarrow \begin{array}{c} R \end{array}$$

Ι

This invention is directed to proteinase (protease) inhibitors, and more particularly to thiol sulfonamide inhibitors for matrix metalloproteinase (MMP-13), compns. of proteinase inhibitors, intermediates for the syntheses of proteinase inhibitors, processes for the prepn. of proteinase inhibitors and processes for treating pathol. conditions assocd. with pathol. matrix metalloproteinase activity related to MMP-13. The title compds. are represented by formula HSCH2CHR4N(R2)SO2R1, R9C(:W)SCH2CH(R4)N(R2)SO2R1, or R1SO2N(R2)CH(R4)CH2S-SCH2CH(R4)N(R2)SO2R1 [R1 = a radical having a length greater than that of a satd. four carbon chain and sorter than that of a satd. eighteen carbon chain, and when rotated about an axis drawn through the SO2-bonded 1-position and the 4-position of a 6-membered ring or the SO2-bonded position and substituent-bonded 3- or 5-membered ring defines a three-dimensional vol.

whose widest dimension has the width of about one Ph ring to about three Ph rings in a direction to that axis to rotation; R2 = H, C1-6 alkyl, C2-4 alkyl substituted by amino or mono- or disubstituted amino; R4 = CO2H, CONH2, C1-6 alkyl; W = O, S; R9 = C1-6 alkyl, C1-6 alkoxy, single-ringed carbocyclic or heteroaryl; provided that R2 = H only when R1 = 4-(phenylazo)phenyl]. They are useful for the treatment of the diseases in which known and new MMP enzymes are implicated, e.g. uncontrolled breakdown of connective tissue by metalloproteinases leading to rheumatoid arthritis, osteoarthritis, tumor metastasis, etc. Thus, $\hbox{N-[(R)-2-hydroxy-1-methylethyl]-N-methyl-4-methoxybenzenesulfonamide}$ (prepn. given) underwent Mitsunobu reaction with thioacetic acid using Ph3P and di-Et azodicarboxylate in THF at 0.degree. for 0.5 h followed by treatment with NaOMe in MeOH to give N-[(R)-2-mercapto-1-methylethyl]-Nmethyl-4-methoxybenzenesulfonamide (I; R = OMe, R2 = Me, R4 = Me). The latter compd. and I (R = SPh, R2 = Q, R4 = CONH2) in vitro showed IC50 of 300 and 2,060 nM, resp., against MMP-1 and 32.5 and <0.1 nM, resp., against MMP-13.

IT 202752-07-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of N-(mercaptoethyl) (benzene or alkyl) sulfonamide derivs. or their disulfides as metalloprotease inhibitors and therapeutics) $\frac{1}{2}$

RN 202752-07-6 CAPLUS

CN Benzamide, N-[4-[[[2-amino-2-oxo-1-[[(triphenylmethyl)thio]methyl]ethyl]amino]sulfonyl]phenyl]-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

AN 1999:579153 CAPLUS

DN 131:214280

TI Preparation of sulfonamides as MMP-8 inhibitors

IN Watanabe, Fumihiko; Tsumiki, Hiroshige

PA Shionogi and Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 11246527 A2 19990914 JP 1998-49260 19980302 <-PRAI JP 1998-49260 19980302

PRAI JP 1998-49260 OS MARPAT 131:214280

GI

AB The title compds. R4R3SO2N(R2)CH(R1)COY [R1 = (un)substituted alkyl, etc.; R2 = H, alkyl, etc.; R3 = phenylene, etc.; R4 = (un)substituted phenyl; Y = NHOH, OH] are prepd. The title compd. I at 1000 nM gave 97.6% inhibition of MMP-8. Formulations are given.

IT 243144-02-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of sulfonamides as MMP-8 inhibitors)

RN 243144-02-7 CAPLUS

CN Benzamide, N-[4-[[[(1R)-1-[(hydroxyamino)carbonyl]-2-methylpropyl]amino]sulfonyl]phenyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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AN 1976:59445 CAPLUS
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DN 84:59445

TI Antidiabetic pyrazoles

IN Irikura, Tsutomu

PA Kyorin Pharmaceutical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 50070367	A2	19750611	JP 1973-121974	19731030
	JP 52038033	B4	19770927		
ד ג סם	TD 1973_191974		19731030		

GI For diagram(s), see printed CA Issue.

AB Pyrazoles I [R = 2-acetylaminoethyl (Q), 2-ethoxycarbonylaminoethyl, 2-(2-methoxy-5-chlorobenzoylamino)ethyl, 2-(2-pyrazinecarbonylamino)ethyl (Q1), Me, iso-Bu, cyclohexyl, Cl; R1 = H, Me, Ph, pentyl; n = 0-1 when R1 = H; n = O when R1 = Me, Ph, pentyl] were prepd. by reaction of p-RC6H4SO2NHCHR1(CH2)nCONHNH2 with AcCH2Ac. Thus, refluxing 10 g N-benzenesulfonyl-.beta.-alanine hydrazide with 5 g AcCH2Ac in EtOH 3 hr gave 99% I (R = R1 = H, n = 1). Among 15 more I prepd. were the following I (R, R1, n given): Me, H, 1; Q, H, 1; Q1, H, 1; and Cl, H, 0.

IT 57891-05-1P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. and antiadiabetic activity of)

RN 57891-05-1 CAPLUS

CN Benzamide, 5-chloro-N-[2-[4-[[[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]amino]sulfonyl]phenyl]ethyl]-2-methoxy- (9CI) (CA INDEX NAME)

4/5/1 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2003 Inst for Sci Info. All rts. reserv.

07916363 Genuine Article#: 223XL Number of References: 56

Title: New targets for anti-inflammatory drugs

Author(s): Lewis AJ (REPRINT); Manning AM

Corporate Source: SIGNAL PHARMACEUT INC,5555 OBERLIN DR/SAN DIEGO//CA/92121 (REPRINT)

Journal: CURRENT OPINION IN CHEMICAL BIOLOGY, 1999, V3, N4 (AUG), P489-494

ISSN: 1367-5931 Publication date: 19990800

Publisher: CURRENT BIOLOGY LTD, 34-42 CLEVELAND STREET, LONDON W1P 6LE, ENGLAND

Language: English Document Type: REVIEW

Geographic Location: USA

Subfile: CC LIFE--Current Contents, Life Sciences

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY; BIOPHYSICS Abstract: Inflammatory and autoimmune diseases, including rheumatoid

arthritis, inflammatory bowel diseases, multiple sclerosis, psoriasis and asthma, provide drug discoverers with a tremendous challenge. The precise causes of these diseases are not known, but our understanding of the molecular and cellular mechanisms associated with inflammatory diseases has increased dramatically. As a consequence, a wide array of gene targets have emerged that control cell influx and activation, inflammatory mediator release and activity, and tissue proliferation and degradation. Since multiple gene products have been identified at the sites of inflammation, there has been a surge of interest in identifying intracellular signaling targets, including transcription factors that control inflammatory gene expression and which are amenable to drug discovery.

Identifiers--KeyWord Plus(R): NF-KAPPA-B; ACTIVATED PROTEIN-KINASES;
MAP-KINASE; RHEUMATOID-ARTHRITIS; JNK PATHWAY; TNF-ALPHA;
T-CELLS; INHIBITOR; DISEASE; AP-1

DIALOG(R) File 34:SciSearch(R) Cited Ref Sci (c) 2003 Inst for Sci Info. All rts. reserv.

07699439 Genuine Article#: 198ER Number of References: 64
Title: Alkyl-lysophospholipids activate the SAPK JNK pathway and
enhance radiation induced apoptosis
Author(s): Ruiter GA; Zerp SF; Bartelink H; vanBlitterswijk WJ; Verheij M

(REPRINT)

Corporate Source: ANTONI VAN LEEUWENHOEK ZIEKENHUIS, NETHERLANDS CANC INST, DEPT RADIOTHERAPY, PLESMANLAAN 121/NL-1066 CX AMSTERDAM//NETHERLANDS/ (REPRINT); ANTONI VAN LEEUWENHOEK ZIEKENHUIS, NETHERLANDS CANC INST, DEPT RADIOTHERAPY/NL-1066 CX AMSTERDAM//NETHERLANDS/; ANTONI VAN LEEUWENHOEK ZIEKENHUIS, NETHERLANDS CANC INST, DIV CELLULAR BIOCHEM/NL-1066 CX AMSTERDAM//NETHERLANDS/

Journal: CANCER RESEARCH, 1999, V59, N10 (MAY 15), P2457-2463

ISSN: 0008-5472 Publication date: 19990515

Publisher: AMER ASSOC CANCER RESEARCH, PO BOX 11806, BIRMINGHAM, AL 35202

Language: English Document Type: ARTICLE

Geographic Location: NETHERLANDS

Subfile: CC LIFE--Current Contents, Life Sciences; CC CLIN--Current Contents, Clinical Medicine

Journal Subject Category: ONCOLOGY

Abstract: Alkyl-lysophospholipids (ALPs) represent a new class of antitumor drugs that induce apoptotic cell death in a variety of tumor cell lines. Although their precise mechanism of action is unknown, ALPs primarily act on the cell membrane, where they inhibit signaling through the mitogen-activated protein kinase (MAPK) pathway. Because stimulation of the stress-activated protein kinase/c-Jun NH2-terminal kinase (SAPK/JNK) pathway is essential for radiation-induced apoptosis in certain cell types, we tested the effect of ALPs in combination with ionizing radiation on MAPK/SAPK signaling and apoptosis induction. Here, we present data showing that three ALPs, 1-0-octadecyl-2-0-methyl-rac-glycero-3-phosphocholine, hexadecylphosphocholine, and the novel compound octadecyl-(1,1-dimethyl-piperidinio-4-yl)-phosphate (D-21266) induce time- and dose-dependent apoptosis in the human leukemia cell lines U937 and Jurkat T but not in normal vascular endothelial cells. Moreover, in combination with radiation, ALPs strongly enhance the induction of apoptosis in both leukemic cell lines. All tested ALPs not only prevented MAPK activation, but, like radiation, stimulated the SAPK/JNK cascade within minutes. A dominant-negative mutant of c-Jun inhibited radiation- and ALP-induced apoptosis, indicating a requirement for the SAPK/JNK pathway. Our data support the view that ALPs and ionizing radiation cause an enhanced apoptotic effect by modulating the balance between the mitogenic, antiapoptotic MAPK, and the apoptotic SAPK/JNK pathways. This type of modulation of specific signal transduction pathways in tumor cells may lead to the development of new therapeutic strategies.

Identifiers--KeyWord Plus(R): PROTEIN-KINASE-C; N-TERMINAL KINASE;
 PROGRAMMED CELL-DEATH; HUMAN LEUKEMIC-CELLS; ETHER LIPID
 1-OCTADECYL-2-METHYL-RAC-GLYCERO-3-PHOSPHOCHOLINE; SIGNAL-TRANSDUCTION;
 IONIZING-RADIATION; PERSISTENT ACTIVATION; PHOSPHOLIPID ANALOGS;
 TRANSCRIPTION FACTOR

DIALOG(R) File 34:SciSearch(R) Cited Ref Sci (c) 2003 Inst for Sci Info. All rts. reserv.

10905579 Genuine Article#: 582GX Number of References: 49
Title: Bisindolylmaleimide VIII enhances DR5-mediated apoptosis
through the MKK4/JNK/p38 kinase and the mitochondrial pathways
Author(s): Ohtsuka T; Zhou T (REPRINT)

Corporate Source: Univ Alabama, Dept Med, Div Clin Immunol & Rheumatol, 465 LHRB, 701 19th St S/Birmingham//AL/35294 (REPRINT); Univ Alabama, Dept Med, Div Clin Immunol & Rheumatol, Birmingham//AL/35294; Sankyo Co Ltd, Biomed Res Labs, Shinagawa Ku, Tokyo 1408710//Japan/

Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 2002, V277, N32 (AUG 9), P 29294-29303

ISSN: 0021-9258 Publication date: 20020809

Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3996 USA

Language: English Document Type: ARTICLE

Geographic Location: USA; Japan

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY

Abstract: Bisindolylmaleimide VIII (Bis VIII) has been previously shown to enhance Fas-mediated apoptosis through a protein kinase C-independent mechanism. In the present study, we examined the effect of Bis VIII on apoptosis induced by DR5 (TRAIL-R2), using an agonistic anti-human DR5 monoclonal antibody, TRA-8. Our results demonstrated that Bis VIII was able to enhance the apoptosis-inducing activity of TRA-8 both in vitro and in vivo. The combination of TRA-8 and Bis VIII led to a synergistic and sustained activation of the c-Jun N-terminal kinase (JNK) and p38 mitogen-activated protein kinase, which was mediated by MAPK kinase 4 and was caspase-8-dependent. The mitochondrial pathway is involved in the synergistic induction of apoptoosis by Bis VIII and TRA-8. Bis VIII alone induced the loss of mitochondrial membrane potential in a caspase-independent fashion without subsequent release of cytochrome c. However, in the presence of Bis VIII, TRA-8 induced more profound loss of mitochondrial membrane potential and release of cytochrome c. These results suggest that the enhanced and persistent activation of the JNK/p38 and the decreased mitochondrial membrane potential play a crucial role in synergistic induction of the death receptor-mediated apoptosis by Bis VIII. The unique ability of Bis VIII to enhance DR5-mediated apoptosis signal transduction discloses a potential utility of this compound in combination with anti-DR5 antibody in cancer therapy.

Identifiers--KeyWord Plus(R): N-TERMINAL KINASE; ACTIVATED PROTEIN-KINASE; ICE/CED-3 FAMILY PROTEASES; FADD-DEPENDENT APOPTOSIS; TRAIL-INDUCED APOPTOSIS; CYTOTOXIC LIGAND TRAIL; SIGNALING PATHWAY; KAPPA-B; T-CELLS; INDEPENDENT PATHWAYS

DIALOG(R) File 34:SciSearch(R) Cited Ref Sci (c) 2003 Inst for Sci Info. All rts. reserv.

11514345 Genuine Article#: 662UR Number of References: 48
Title: Synergistic induction of tumor cell apoptosis by death receptor antibody and chemotherapy agent through JNK/p38 and mitochondrial death pathway

Author(s): Ohtsuka T; Buchsbaum D; Oliver P; Makhija S; Kimberly R; Zhou T (REPRINT)

Corporate Source: Univ Alabama, Dept Med, 465 LHRB, 701 19th St S/Birmingham//AL/35249 (REPRINT); Sankyo Co Ltd, Biomed Res Labs, Tokyo 1408710//Japan/; Univ Alabama, Dept Med Radiobiol, Birmingham//AL/35294; Univ Alabama, Div Gynecol Oncol, Birmingham//AL/35294; Univ Alabama, Dept Math, Birmingham//AL/35294

Journal: ONCOGENE, 2003, V22, N13 (APR 3), P2034-2044

ISSN: 0950-9232 Publication date: 20030403

Publisher: NATURE PUBLISHING GROUP, MACMILLAN BUILDING, 4 CRINAN ST, LONDON N1 9XW, ENGLAND

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Abstract: Using two agonistic monoclonal antibodies specific for each death receptor of TRAIL, 2E12 (anti-human DR4) and TRA-8 (anti-human DR5), we examined the signal transduction of the death receptors in combination with or without chemotherapy agents such as Adriamycin (doxorubicin hydrochloride) and Cisplatin. Our results demonstrated that chemotherapy agents were able to enhance apoptosis-inducing activity of these antibodies against several different types of tumor cell lines through enhanced caspase activation. The combination of the antibodies and chemotherapy agents led to a synergistical activation of the JNK/p38 MAP kinase, which was mediated by MKK4. The combination also caused an increased release of cytochrome c and Smac/DIABLO from mitochondria in parallel with the profound loss of mitochondrial membrane potential. These results suggest that the enhanced activation of the JNK/p38 kinase and the mitochondrial apoptosis pathways play a crucial role in synergistic induction of the death receptor-mediated apoptosis by chemotherapy agents. Thus, the simultaneous targeting of cell surface death receptors with agonistic antibodies and the intracellular JNK/p38 and the mitochondrial death pathways with chemotherapy agents would enhance the efficacy and selectivity of both agents in cancer therapy.

Descriptors--Author Keywords: apoptosis ; TRAIL receptor ; chemotherapy ; JNK ; mitochondria

Identifiers--KeyWord Plus(R): TRAIL-INDUCED APOPTOSIS; FADD-DEPENDENT APOPTOSIS; CYTOTOXIC LIGAND TRAIL; BLADDER-CANCER CELLS; N-TERMINAL KINASE; MEDIATED APOPTOSIS; DR5-MEDIATED APOPTOSIS; TUMORICIDAL ACTIVITY; ANTITUMOR-ACTIVITY; ANTICANCER AGENTS